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THE COMMUNITY FACTOR IN MODERN TECHNOLOGY

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THE COMMUNITY FACTOR IN MODERN TECHNOLOGY

An International Study of the "Sense of Belonging" in Industry

by

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and

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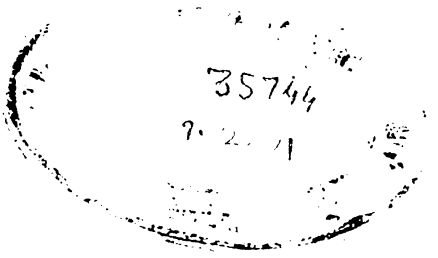
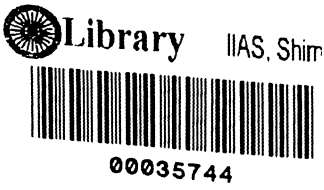
UNESCO

Published by the United Nations
Educational, Scientific and Cultural Organization
Place de Fontenoy, Paris-7e
1st impression, 1952
2nd impression, 1960 (printed by IFMRP, Paris)





Printed in France
SS.59/V.1.a/A

FOREWORD

At the Fourth Session of the General Conference of Unesco a resolution was passed authorizing the Director-General to promote enquiries into "the influence of modern technology upon the attitudes and mutual relationships of peoples".

In 1951 the Executive Board of Unesco directed that particular attention should be given to "possible methods of relieving tensions caused by the introduction of modern techniques in non-industrialized countries and those in process of industrialization", and the present publication is one of the studies flowing from that decision. The purpose was to have made, on a comparative basis, an international survey of cases where there has in practice been brought about a sense of fellowship, harmony and community, in modern industrial undertakings.

This publication comprises field studies made in six countries (Belgium, France, Italy, Sweden, Switzerland, United Kingdom) by specialists, whose names are listed below, under the general guidance of Miss Patricia Elton Mayo. It has been prepared by Mr. Jerome F. Scott and Mr. R. P. Lynton, whose services were kindly made available by the British Institute of Management. Besides synthesizing the field studies made specially for the purpose of the report, the authors have made use of much other material (more particularly from the North American continent) so that the publication covers a wide field.

In making the report the authors state that they have particularly had in mind their co-workers in the field. Trade unionists, personnel managers and others professionally or otherwise concerned with the question of good relationships in industry may find in the ensuing pages material of practical value in their day to day work; and social scientists will, it is hoped, find interest in this application of the comparative method to a vitally important sphere of human relations.

The preparation of the study was entrusted to the above-mentioned authors, assisted, as has been explained, by the specialists listed below, and they alone assume responsibility for the views expressed, which do not necessarily correspond to those of Unesco.

"If our social skills had advanced step by step with our technical skills, there would not have been another European war."

ELTON MAYO

CONTENTS

INTRODUCTION

The history of industrialization is the history of increasing wealth. But it is also the history of a loss in the sense and value of community. By community we mean something larger than a group of people associating for a specific purpose, something greater than a permanent institution: we mean things shared and held in common, the free association and basic understanding, by which people "belong"—and from which they gain a sense of function and place amongst their fellow men. In that sense, traditional established communities have been disrupted and new communities have often failed to grow. Many people no longer have an inner sense of belonging anywhere.

The great danger in this is only too clear: "If our social skills had advanced step by step with our technical skills there would not have been another European war".[1] Some people feel already that it is too late, that technical development has already irretrievably swamped the amalgam of social attitudes and social habits and social institutions which make up a community.

We do not believe that this fear is justified. The increasing awareness of the problem, of which this fear is a sign, is itself the essential first step to improvement.

The present study is limited to the industrial field. It explores the possibilities of community wherever people work together. Industry is, of course, only one factor in the building of a community; education, local government, sports and many other activities bring a feeling of "togetherness". Two propositions follow from this conception of industry. First, industry cannot ignore the need for community satisfactions or expect them to be wholly supplied elsewhere; industry is either part of a community, or it disrupts it. Secondly, industry cannot solve the problem alone, e.g., by "running" communities. Its contribution must be balanced by contributions from the other aspects of life.

The general problem then is briefly this: (a) Every man needs the

[1] Elton Mayo, *The Social Problems of an Industrial Civilization*, 1945 Boston, Massachusetts, Harvard Graduate School of Business Administration.

mental and emotional life which only membership of a community can give. (b) Failure to satisfy this primary need leads to sickness or maladjustment and the deceptive satisfactions provided, in Mr. John Mack's phrase, by "some men who would remake other men". (c) The conditions in which men have traditionally found community are disappearing. We can only grow in our environment, and this is now an industrial environment.

There are many examples—some to be mentioned here but mostly unknown and uncounted—of organizations which are effectively part of a community as well as the means of producing goods and services. Their standards must be maintained and their example followed, not only by new enterprises, from the moment of their introduction into communities, but throughout industry generally.

The trade unions have for long been one of the main agencies concerned with securing for their members such rights as proper wages and working conditions and social security. To some they have seemed to go too far to secure these rights; to others, not far enough. The job yet to be done is to put these aspects in perspective as parts of a whole—to see John Citizen at work and at play, in union and local community activities and in his role as a member of the world community. Medicine, psychology and the social sciences generally are more and more broadening their approach to concern themselves with persons and groups, not merely aspects of persons and parts of groups. Thus, for instance, the relationship between community satisfaction and productive efficiency is being scientifically demonstrated—though some will find it a revealing comment on industrial society that we should have to rediscover such a relationship. Again, we are discovering, or rediscovering, that the achievement of a sense of community does not eliminate conflicts, that it only makes possible the relationships in which conflicts can be resolved.

As the study of organisms, of whole individuals and whole groups supersedes the study of parts and aspects—as students of society come increasingly to realize that the whole is far more than the sum of its parts—the logical and useful units for study are particular individuals, particular groups, particular organizations. To that end, 12 studies were specially carried out for inclusion in this volume, two each in Belgium, France, Great Britain, Italy, Sweden and Switzerland. The persons mainly responsible were: Belgium: Mr. Robert Caussin, Administrateur Directeur du Comité National Belge de l'Organisation Scientifique, Brussels. France: Mr. Jean Milhaud, Commission Générale d'Organisation Scientifique, Paris; Mr. Louis Pehuet, Comité National d'Organisation Française, Paris. Great Britain: Field Research Group, British Institute of Management, London. Italy: Professor Paolo Barbi, 11 Fiorentine a Chiaia 9, Naples; Dr. Aldo Ferrarotti, Hotel Dora, Ivrea, Turin. Sweden: Professor Sune Carlson, Ph.D., University College of Commerce, Stockholm: Per Ernmark, Personnel

Manager, Esselte Printing Co., Gothenburg. Switzerland: J. J. A. Chapuis, Comité National Suisse d'Organisation Scientifique, Geneva.

For examples and illustrations we have also drawn on studies already published. Five studies in particular are referred to at length:

W. Lloyd Warner and J. O. Low, "The Factory in the Community" in *Industry and Society*, ed. W. F. Whyte. 1946, New York, McGraw-Hill, pp. 21–45.

Elton Mayo and George F. F. Lombard, *Teamwork and Labour Turnover in the Aircraft Industry of Southern California*, 1944, Harvard School of Business Administration, Business Research Studies. No. 32.

J. F. Scott and R. P. Lynton, *Three Studies in Management*, Chapter III: Introducing Factory Employment into a Small Community, autumn 1952, London, Routledge and Kegan Paul.

Elliott Jaques, *The Changing Culture of a Factory*, 1951, London, Tavistock Publications Ltd., Chapter IV: The Service Department, pp. 78–105.

F. J. Roethlisberger and William J. Dickson, *Management and the Worker*, 1942, Cambridge, Massachusetts, Harvard University Press.

As a help to the reader, the many examples and illustrations throughout our text are set in smaller type so as to be distinguishable from the main text. They are not essential to the main text which can be read without reference to them.

The matter falls into two parts: some studies deal with the disruption, or the maintenance, of established communities, others with the absence, or the growth, of new communities. Readers concerned with industrialization in Asia, Africa and South America may be particularly interested in the former. Introducing industry into some European or American communities is similar in many respects to introducing industry into communities in Thailand, Nigeria, Turkey or Uruguay. In fact, it is probably more useful to think in terms of industrializing communities than in terms of industrializing countries.

The twofold distinction is maintained in the first three chapters. Chapter I refers at length to a study which traces the disintegration of a community and to another which describes social sickness where no community had grown, and then sets out the problem.

Chapter II draws on the 12 studies of European organizations which have gone some way towards maintaining or fostering communities.

Chapter III is devoted to a more intensive study of the processes involved. Are these organizations just freaks? It is unlikely. Their many basic similarities and the possibility of interpreting these in terms of broad sociological concepts point to lessons of general importance.

Chapter IV draws out some of the general concepts and lessons. One is that action must be closely related to the particular circumstances of each case.

Chapter V indicates some of the points to be borne in mind when

doing this. It is written also for those carrying out long-term studies, to whom it may be of particular interest. For the development of knowledge and understanding of social processes depends on further study, and this in turn depends on sound research methods.

Chapter VI, finally, points to some possible implications of successful community making. For instance, greater understanding may make the wide dispersal of industry possible as well as desirable, and help integrate agriculture and industry, town and country. Again, the processes by which people become effective members of groups and larger organizations, and obtain community satisfactions, probably make them also better citizens of their community, of their nation and of their world.

J. F. S.
R. P. L.

London, 1951.

I. THE DISCORDS OF INDUSTRIAL SOCIETY

"That so many city children have never seen a cow is generally regarded as a scandal—and rightly so. But that a great many more—specially in Europe—have never been inside a factory should have been even more astounding. Actually, all of us accepted it as the most natural thing in the world, precisely because the industrial system was not part of the social order in which we lived."

P. Drucker. [1]

The nature and functions of communities is not a new subject. In growing volume studies describe the processes and the results of the disruption of society. The writings of historians, novelists and anthropologists help us to picture the nature and workings of established communities. Pathologists, sociologists, and novelists again, have depicted their disruption. Some little progress has also been made in the social scientist's primary task, which is to learn from examples of social health and from the lessons of pathology how communities can be maintained and under what conditions new communities grow.

THE ESTABLISHED COMMUNITY

Descriptions of established communities of yesterday and today focus on stability and coherence. Attitudes, customs and institutions support one another in a coherent whole. The important social groupings are small and change is slow.

Sabine's description of community life in the Middle Ages rings true for established communities at other times and elsewhere:

"The village and neighbourhood groups in which men lived and worked were relatively permanent or only slowly changing, and they were relatively small. By long habituation men understood their positions in them. In them they had status and enjoyed respect. The range of opportunity was small, but expectations and prospects were relatively secure at least so far as they depended upon the social

[1] *The Future of Industrial Man*, 1942, New York, John Day, p. 42.

structure; the chances and mischances of life that come from living in an uncertain world were for the most part not the effect of conditions within the social group. Authority operated within relations of rank that were largely accepted as a matter of course. The values of good workmanship, of neighbourliness, and of honest dealing were carried by codes that were habitual to the group. Within such a group the individual's life stretched out before him from childhood with each step clearly marked, and the place that he was to fill as an adult was easily foreseen. The gains that he could hope to make were there to be seen, the steps toward them were readily comprehensible, and the obligations that he was expected to assume appeared as the logical consequences of the training he received. By and large men throughout history have found their place in the world of societies of this kind and have developed their sense of moral obligation from the ties that existed within such groups." [1]

Their customs and religion, according to Homans, form "a cosmology, in which the questions of men could find answers; their actions, justification; their fears, reassurance; their wishes, fulfilment".[2] They had "no occasion to speak of the advantages or disadvantages of their customs. Either they did not think about their customs at all or they took them as part of the nature of things".[3] ". . . a man would plow his field as he would woo his wife, in the manner expected in the community".[4]

The activities of the inhabitants promoted economic ends at the same time as they sustained spontaneous co-operation and solidarity. The two were inextricably mixed. There was no strict separation of work and play; the present gulf is a feature only of modern industrial society.

"Sometimes indeed the economic end in view may have been almost incidental to the company to be enjoyed. When in an old-time New England town a family held a bee, calling in the neighbours to help in some special piece of work, the party was by all accounts among the most enjoyable of the farmer's year. The work to be done was little more than an excuse for holding the bee. In any backward farming community much of the work has these characteristics. It must be done in co-operation and is enjoyable as a gathering of company. So it was in English villages of the thirteenth century. The benes of harvest must have come near to New England bees as occasions for society.[5]

"Besides offering a thorough technical education, apprenticeship was also a system of social training. In those days the guild was closely linked with the municipality, and the status of citizenship involved real responsibilities . . . loyalty to the city was a living inspiration, and it was for apprenticeship to fashion good citizens and to give active service to the council chamber when it was needed." [6]

In the same automatic fashion, everybody "belongs" as a matter of course. The "sense of belonging" just *is*. A book on *achieving* a sense of belonging is a typically modern phenomenon.

[1] Sabine, G. H., "Beyond Ideology" in *The Philosophical Review*, January 1948 Ithaca, N.Y., Cornell University Press, p. 135.
[2] Homans, G. C., *English Villagers of the Thirteenth Century*, 1942, Cambridge, Mass., Harvard University Press., p. 397.
[3] Ibid., p. 125.
[4] Ibid., p. 404.
[5] Ibid., p. 348.
[6] Revans, R. W., "The Status of the Professional Association Past and Present", in *The Mining and Electrical and Mechanical Engineer*. August 1949, p. 45.

"The primary unit of production in the early days of gild organization was the independent master who worked with one or two assistants, whom he himself may have trained, and an apprentice or two still learning the trade. The market for his products was limited and did not in general expand far beyond the city walls. Similarly, he was little affected by what went on in the outside world. There was little interchange of ideas, little change in the methods of work. The master depended on the continued custom of the small community; and the community in turn relied on him, as a matter of course, to provide it with its bread or meat, boots or dresses, cupboards or houses, in much the same way as his forefathers had done.

"The relationship between the master and his workmen and apprentices was of the closest. No lasting social distinction divided them: for most workmen and apprentices would become master in due course. A unison of outlook was also induced by the paternal organization, in which they all not only worked but also lived together in the same house, ate the same food, shared in the same pleasures and in the same sorrows, knelt side by side in church on Sundays. Their relationship was similar to that of 'the head of the household to the sons of the family'. . . . The composition of the 'family' rarely changed, for apprentices and workmen were generally taken on for long periods of service.

"It was natural that the immediate stimulants and deterrents with regard to work should take their cue primarily from this paternal organization, supported, as it was, alike by gild, city and church . . . much of their weight was undoubtedly derived from the widely acknowledged authority of the gild as a corporate institution. The ceremonious way in which gild functions were carried out was itself conducive to investing in the gild something of the halo and the air of permanency attaching to public institutions. The width of its functions, comprising, in addition to matters of technical and economic interest, religious and artistic activities and others connected with what are now termed the social services, was a yet more weighty factor. Many a 'Gilhault Court' heard and attempted to settle disputes between members, before they could proceed to the common law; it also dealt with masters who held back wages or those accused by their workmen of other offences, such as that they did not give proper training. Finally, the oath which bound all members to observe gild regulations had a supernatural backing and was recognized in church courts.

"The emphasis in all this was on propriety. Standards, rigidly laid down by regulations, were to be maintained by equally closely regulated methods. Extraordinary attainment was at a discount. Often initiative on the part of craftsmen was deliberately discouraged: it might upset the equality within the group and possibly endanger the livelihood of other members. . . . The regulation of activities did not end with the acceptance, by the gild, of the masterpiece or similar qualification. There was always little chance to conceal incapacity, dishonesty or slackness. Minute regulation covered all aspects of work. Even detailed supervision by the public was not unknown . . . and there was the continuous desire to gain and retain the approbation of the small community. Only thus could the master advance to honoured office in gild and city, to support and reverence in old age, and to a place in the Kingdom of God thereafter."[1]

We may here list four important characteristics of established communities as being of particular interest. First, all aspects of life are closely integrated—work, for instance, is not something separate and distinct. Secondly, social "belonging" is automatic. Thirdly, change is slow, and continuity is sustained by attitudes, customs and institutions. And lastly, the important social groupings are small.

[1] Lynton, R. P., *Incentives and Management in British Industry 1949*, London, Routledge and Kegan Paul, pp. 16-19.

The modern history of Western society suggests some general processes through which established communities are broken up. Social groupings get larger and exclusive sub-groups and classes begin to form, each with its particular interest.

"The growth of towns and markets for manufactures encouraged methods of organization and production which it was increasingly difficult to maintain side by side with the prevailing pattern of gild life. The large influx of workers seeking employment in the cities made existing masters afraid for their position. They sought to maintain it by imposing increasingly irksome restrictions on entry into the gilds via apprenticeship and, where entry was attained, on craftsmen setting up as independent masters. Whole classes of people were excluded outright from admission on the grounds of some inherent deficiency of status or physique. Others were confronted with staggering entrance fees. . . . The paternal organization of production declined *pari passu* with the workers' opportunities to become independent craftsmen, and by the middle of the fifteenth century there existed in many trades and localities a definite social distinction between master and workmen.

"A rapid increase in the number and scope of regulations affecting the relationship between the two parties marked the changes: they were mostly designed to maintain an out-of-date pattern. Moreover, it remained the business of the masters to enforce the regulations, and in many cases it no longer suited them to do so. This was so, for instance, with regard to the restrictions on the numbers of apprentices, workmen and tools that any master was permitted to employ; and their ineffectiveness ensured that for many a master it soon became a physical impossibility to house all the workers he employed under one roof. Wages, hours and other working conditions, again, were no longer guaranteed: to the masters the prospect of wealth, coupled with a plentiful supply of workmen, suggested lower wages and longer hours. Thus the practices of earlier capitalist industries became familiar in trades which were, according to the letter, still operating on gild lines." [1]

Activities become specialized and distinct and are labelled work, leisure-time, etc. Old customs and cosmologies are questioned, and new ones arise to sustain the trends, at conflict with the old. With them disappears the sense of permanence of relationships and institutions.

"The new religions . . . set greater store, not less, on the supernatural value of good, hard work than the medieval Church had done. . . . But where the Church had regarded good work as a part only, though a necessary part, of a good life, the new beliefs, particularly those of the various dissenting sects, equated the two, and found it impossible to visualize any joy or purpose in life apart from what could be found in work . . . partly because of this very appeal of the new beliefs, the adherents of the new sects tended to be masters rather than workmen. Of the workmen few took to the gospel of excessive work. . . .

"Every increase in the mechanization and the concentration of production was a godsend to the employers. For did it not render labour so light and subject to such continuous supervision that women and children could do it as well as the men and at wages much lower than they? In the growing mills and factories strength, experience and skill in the old sense ceased to matter.

[1] Ibid., pp. 19-20.

"Endurance to mind the machine for 16 to 20 hours a day, a memory for instructions and regulations, and swiftness in avoiding the hazards of dangerous and unguarded machinery took their place. Weavers, blacksmiths, tanners, sailors and yeoman farmers, boys of six and girls and women, merged their separate identities in the pool termed 'labour', whence employers extracted whom they would. . . ." [1]

Before very long some effects of these new conditions begin to show, but they are not widespread enough to command serious attention. And what attention they get is likely to be dissipated by new philosophies.

For instance:

"No longer subject to close and continuous supervision by the master and the gild and deprived of the ladder which had formerly led to the status of independent craftsman and all that status entailed, the workmen no longer gave satisfaction. . . .

"In practice, the insistence of the masters on hard work combined with a frugal standard of life could only lead them to apply but one principle in dealing with their workmen. It required that the attainment of this frugal standard should be made as difficult as possible: it involved paying workmen as little as they needed merely to keep alive, depriving them of all means whereby they might be able to increase their incomes outside of industry. . . .

"Contemporary scientific thought, and economic theories in particular, strongly supported the Puritan methods of inducing the workmen to work. Anything that could not be expressed 'in terms of number, weight, or measure was excluded from consideration': sensible people were expected 'to use only arguments of sense, and to consider only such causes as have visible foundations in nature; leaving those that depend upon the mutable minds. opinions, appetites. and passions of particular men to the consideration of others'. This eliminated all but material incentives." [2]

For the moment most people continue to live as before. Prosperity increases. And the specialized new social groups enjoy something of a community life of their own.

"Industry and trade expanded rapidly from the late seventeenth century onwards. Prosperity increased with them. It was bound, eventually, also to affect the outlook of the workmen. The transition was patchy. It proceeded comparatively fast in some districts and more slowly in others; yet others remained untouched for many years. [3]

"Everybody in business in nineteenth century London, New York, Boston, Amsterdam, Hamburg or Paris knew precisely who 'belonged' and who did not, who mattered and who was of no account, why one house was powerful and the other one only rich, why a hint from one was an order, and an order from another was meaningless." [4]

But the trends interact and become strong, and successively whittle away the main pillars of the established community. So long as nothing equally comprehensive and coherent takes its place, this is a transitory phase.

[1] Ibid., pp. 22—6.
[2] Ibid., pp. 21—4.
[3] Ibid., p. 28.
[4] Drucker, op. cit., pp. 65—6.

The changes gain momentum and with them the processes of dis integration. The turn of the twentieth century provided an impressiv example in Western society. Basic old-established trades, for instance changed fundamentally within a generation or two, and new trade grew to great size. Material things multiplied.

"By 1850 industrialization and the use of power was spreading from Britain t other countries with great demands for energy. Between 1850 and 1900 the world' coal consumption expanded from 100,000,000 to 1,000,000,000 tons a year. Thi half century was a time of rapid change when the modern interplay of scienc and technology was taking shape, and two new ventures in the field of energy electricity and the internal combustion engine, were destined soon to change th technical and social pattern of the world, as steam had done a century before. . .

"The sinking of the first oil well in Pittsburg in 1850 saw the birth of a nev industry, whose annual output grew from 20,000,000 tons in 1900 to 500,000,00 tons in 1950, and during those years the number of motor vehicles in the worl increased from 20,000 to 62,000,000." [1]

"In the tailoring and shoemaking trades of the mid-nineteenth century," Grahan Wallas wrote in 1910, "men worked in indoor workshops in small groups of hal a dozen up to 20, without the noise of machinery or the presence of an employer Next to them came the compositors, working under much the same conditions and the cabinet makers, whose work, though not silent, was not so noisy as to prevent conversation. . . .

"By 1910 all boots and nearly all clothes, except those worn by a small rich class, are made in factories, under conditions which render discussion during working hours impossible. The proportion of working men who can now talk freely at their work, in convenient groups, meeting day after day, must be almost negligible. All the metal trades are too noisy, the agricultural labourers work at too great a distance from each other, and modern business premises are now, as a rule, deliberately constructed so as to secure that those engaged in clerical work shall always be under the eye of the supervisor and shall be prevented from any kind of conversation about anything but their duty. The working day itself is shorter, but many, if not most of the hours saved from work are now spent in travelling by crowded trains and trams between the place of business and the widely spread homes of the present day." [2]

Community life was seriously affected, alike at work and outside work. So much was clear to an increasing number of observers. But nothing was really done. Now great numbers of people find themselves without community, have no "sense of belonging".

"The whole of Bromstead as I remember it and as I saw it last—it is a year ago now—is a dull useless boiling-up of human activities, an immense clustering of futilities. It is as unfinished as ever; the builders' roads still run out and end in mid-field in their old fashion; the various enterprises jumble in the same hopeless contradiction—if anything, intensified. Pretentious villas jostle slums, and sculleries gape towards the railway, their yards hung with tattered washing unashamed; and there seem to be more boards by the railway every time I pass, advertising pills and pickles, tonics and condiments, and such like solicitudes of a people with no natural health or appetite left in them. . . .

[1] Sir Harold Hartley "Man's Use of Energy in the Advancement of Science", *The Listener*, Vol. XLIV, No. 1127, 31 August 1950, p. 295.

[2] *The Great Society*, 1917, New York, MacMillan, p. 282.

"I suppose one might have persuaded oneself that all this was but the replacement of an ancient tranquility, or at least an ancient balance, by a new order. Only to my eyes, quickened by my father's intimations, it was manifestly no order at all. It was a multitude of unco-ordinated fresh starts, each more sweeping and destructive than the last, and none of them ever worked out to a ripe and satisfactory completion. Each left a legacy of products—houses, humanity or what not in its wake. It was a sort of progress that had bolted; it was change out of hand, and going at an unprecedented pace nowhere in particular. [1]

"We come back perhaps to London or Leeds after a visit to a place where a simpler form of life is still in some degree possible. . . . On the morning after our return, we notice from a fresh point of view the men and women who hurry with us out of the trains, or bend over ledgers in banks and offices or stand tired and vacant outside factories in the dinner hour. Here and there we see an eager dark-haired boy, who seems to have found the environment that fits him best. He has perhaps been taken on as an assistant porter at King's Cross, and is irradiated, not only with confidence in his own future, but with a glorious sense of identity between himself and the Great Northern Railway. Such faces are, however, rare exceptions. Of the rest, not many perhaps are consciously unhappy, but there are strangely few signs of that harmony of the whole being which constitutes happiness." [2]

Mayo refers to Benjamin Disraeli's early reflection: ". . . amid arts forgotten, and commerce annihilated, fragmentary literatures and populations destroyed, the European talks of progress, because by an ingenious application of some scientific acquirements he has established a society which has mistaken comfort for civilization".

And himself continues:

"It is as though man himself is not expected to progress, but only his material surroundings, his bodily comfort; and the high gods exact as price turmoil, confusion, chaos—and, finally, internecine war." [3]

THE DISINTEGRATION OF A COMMUNITY: A CASE

Where the processes of disruption have been at work for some considerable time, as is the case in Western society, the problem manifests itself in two ways: first, in the disruption of established communities, which we have outlined in the previous pages; secondly, in the failure of new communities to grow. Before we go on to examine some important effects of these trends in different spheres of activity, we propose to devote some space to a more detailed description of each. For this we rely on two studies—each portraying one of the main trends.

For a more detailed description of the processes of social disintegration we may refer to the study of Yankee City, now a classic. The work of W. Lloyd Warner and J. O. Low shows in some detail how the changes we have been briefly describing manifested themselves in a particular community—a small 300-year-old New England industrial town.[4]

[1] H. G. Wells, quoted by Elton Mayo, *The Social Problems of an Industrial Civilization*, p. 3.
[2] Wallas, op. cit., pp. 6—7.
[3] Mayo, op. cit., p. 4.
[4] We are here using the summarized version, "The Factory in the Community", which Warner and Low contributed to *Industry and Society*, ed. F. W. Whyte.

In the course of the nineteenth century the economic life of Yankee City came to be dominated by one industry—shoemaking. Shoemaking changed from a handcraft, based on the family, to mass production. The job was "de-skilled". Ownership of materials, tools, and products passed from the family to *local owner-managers*, and finally to people *living outside* Yankee City. The market for shoes became widened to include the nation, then the world.

"Shoemaking was always important there, but it was not until near the end of the nineteenth century that it achieved its place of supreme importance in the economy of the town. From the beginning, shipping, shipbuilding, fishing, and the other trades of the sea had dominated Yankee City's economic existence and set their mark on the community. When the New England shipping industries disappeared, Yankee City turned from the sea and sent its many drummers, salesmen, and manufactured goods westward to make the profits necessary for the establishment and continuance of its factory system. It was then that the textile manufacturers moved into the lead, but throughout the whole period shoemaking contributed significantly to the economic life of the city and, by the end of the century, had risen to a commanding place. . . ." [1] "During the technological development of Yankee City's shoe industry, the tools changed from a few basic ones, entirely hand-used, to machines in an assembly line; and their product changed from a single pair of shoes to tens of thousands in mass production. In the beginning, the family made its own shoes or a highly skilled artisan, the cobbler, made shoes for the family. In time, several families divided the highly skilled jobs among themselves and their families. Ultimately, a central factory developed and the jobs were divided into a large number of systematized low-skilled jobs. The history of ownership and control is correlated with the changes in the division of labour. In early days, tools, skills and materials were possessed by the family. Eventually the materials were supplied by the owner manager and soon he also owned the tools and machines. The sequence of development of producer-consumer relations tells a similar pointed story. The family produced and consumed its shoes all within the circle of its simple unit. Then the local community was the consumer-producer unit, and ultimately the market became national and even world-wide. Workers' relations changed from those of kinship and family ties to those of occupation, where apprenticeships and craftsmanship relations were superseded, and the industrial union became dominant in organizing the affairs of the workers. The structure of economic relations changed from the immediate family into a local hierarchy, and the locally owned factory changed into a vast, complex system owned, managed, and dominated by New York City." [2]

Two aspects of the changes were selected for more detailed examination: the worker's status in the factory and the community; and the participation of factory owners and managers in the life of Yankee City. Mass production eliminated the skill hierarchy in which the young had learnt from their elders ways of life as well as their craft, and in which they had found that integrity of existence which is called "security".

"During the early periods of the factory in Yankee City a skill hierarchy dominated the lives of the workers and helped establish their place in the community. . . . It was really an age-grade system. Youngsters served their hard apprenticeship

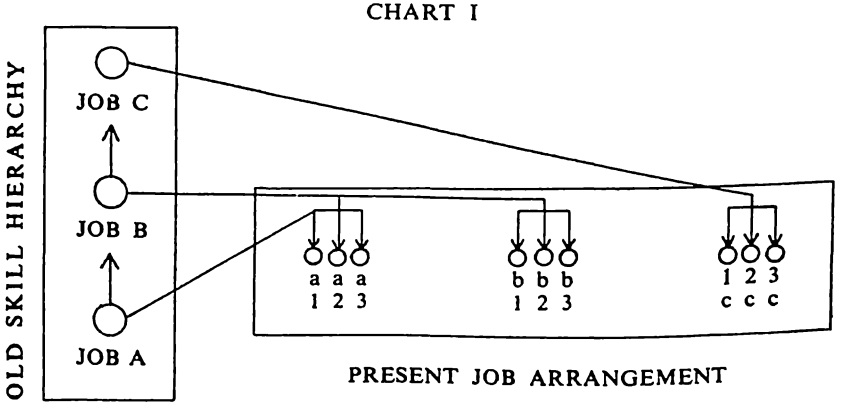
[1] Ibid., pp. 24—5.
[2] Ibid., pp. 28—9.

and, as neophytes, learned their task and, even more important, were taught to respect the skills they had learned and those they looked forward to learning. Above all, they acquired respect and admiration for the older men above them who had acquired the skills and who occupied the proud positions of journeymen and master craftsmen. These youngsters aspired to achieve for themselves a similar high position and to be the objects of a similar respect of their fellow craftsmen and fellow townsmen. Each young man, in direct face-to-face interaction with those above, imitated and learned a way of life while being highly motivated by the strong desire to escape the irksome limitations of his present low position and to attain the higher place where he would have the satisfaction of making his own decisions and possess the prestige and pay consequent to such eminence. . . .

"In learning to respect the skill of the master craftsman, the apprentice learned to respect himself. He had security in his job, but he had even greater personal security because he had learned how to respect it. And because he was a member of an age-graded male fraternity made up of other men like himself who had the knowledge and necessary skills to make shoes, he possessed that feeling of freedom and independence and of being autonomous that comes from leading a disciplined life. He spent his life acquiring virtue, prestige, and respect, learning as he aged and climbed upward, and at the same time teaching those younger than he, who aspired to be like him.

"Slowly this way of life degenerated and the machine took the virtue and respect from the workers, and at the same time broke the skill hierarchy that dominated their occupation. There was no longer a period for young men to learn to respect those in the age grade above them and in so doing to become self-respecting workers.

CHART I



"Chart I illustrates . . . how the vertical hierarchy of skilled jobs has become a horizontal layer of low-skilled ones, each of the skilled jobs has been divided into a number of simple, low-skilled ones and machines are performing most of the actions necessary for each job. Jobs formerly at the top and bottom of the hierarchy that were separated by higher and lower prestige and paid accordingly are now in the same category of prestige and pay." [1]

As long as the factories were owned and managed by residents of Yankee City, they were in many ways subject to local control. The owners, managers and financiers were recognized leaders in the community and participated in all its affairs. (The study lists 24 local

[1] Ibid., pp. 31—3.

institutions—business, civic, political, religious, entertainment—of which the most powerful manufacturer was an active member.) These men were imbued with local sentiments which moved them, for instance, "to take care of their own people. They were under the powerful influence of the numerous organizations to which they belonged and of their personal contacts with local citizens". With the transfer of ownership to "outsiders", living elsewhere, most of these local ties snapped.

"In the early days of the shoe industry . . . there was no extension of the factory social structures outside the local community. The factories were then entirely under the control of the community; not only the formal control of city ordinances and laws, but also the more pervasive informal controls of community traditions and attitudes. There were feelings of neighbourliness and friendship between manager and worker and of mutual responsibilities of each other and to the community that went beyond the formal employer-employee agreement . . . the shoe manufacturers were accepted by all social strata as leaders of the total community....

"The Yankee City financiers, too, were men of responsibility, dominated by sentiments of local pride. They did well for themselves, but they also did well for the city. Perhaps the price was high, but the product bought by the rest of the community was substantial and of high quality. Their philanthropies, combined with their power and leadership, contributed enormously to the city's development and provided a firm foundation for the larger civic life of the community. Parks, libraries, hospitals, societies to help the unfortunate and aged, foundations to send young men to college, endowments of schools, churches, and many other worthy civic enterprises were granted and maintained by the money and leadership of the local financiers and manager-owners. . . .

"The advent of big-city capitalism shattered this closely woven network of personal relations, loyalties, and obligations. Yankee City shoe factories are no longer owned exclusively by local citizens. More and more of them have been absorbed by larger enterprises whose executive offices are in New York City. At the time of our study, the largest shoe factory in Yankee City was owned by a company which operated several other factories in New England and which also owned the nation-wide ABC chain of retail shoe stores, all of which were controlled from a central office in New York. Even some of the smaller Yankee City shoe factories, although still locally owned and managed, sold most of their shoes to chain-store organizations. . . .

"As the vertical hierarchy of the factory system extended to executive offices in New York, even the local factory managers came to be, for the most part 'outsiders' and members of ethnic minorities. They had their factories in the town and some of them drove to work in the morning and left at night. The workers knew or felt that the forces that controlled local men would not control these outsiders. The vast network of relations and memberships that made the former owners local leaders, as well as local manufacturers, had been reduced to a purely economic one of employer and employee." [1]

The results of these developments permeated the whole community. Even if the managers were local people, they ceased to be in a position to take a lead in the affairs of Yankee City. The workers lost contact with their employers. People in the highest social positions in the community were isolated from the community's main industry. Shoemaking was no longer an integral part of the business and community life of Yankee City.

[1] Ibid., pp. 34—40.

". . . the few local men who were managers . . . were little more than the factory managers for big-city capitalists, for they occupied inferior positions in this vastly extended vertical structure. They were not in a position to take leadership. They were not in a position of great power where they were free to make the decisions that always characterized the lives of the owners of the previous period. . . .

"In these days of big-city capitalism, when Yankee City had lost control of its own destinies, few workers would go up to the 'big Boss' to tell him 'what's wrong in the cutting room' and those who did were not considered the respected friends of the workers but 'stool pigeons who were getting theirs from management'. . . .

"The local managers, reduced to inferior statuses in the industrial hierarchy also occupied lower social class ranking in the community than their predecessors. . . . Because of this inferior position of the managers, those men in the community (the former owners) who would once have been their natural allies and who enjoyed top social class position, were now above them and shared none of their interests, were hostile to them and friendly to the workers.

"In the 'good old days', the people of Yankee City felt that they all shared in a common way of life, in which business and industry was closely integrated into the community. This way of life had its frictions and conflicts, but it provided all the people with a set of common symbols to guide their behaviour, and it also provided effective leadership from the top of the social order. Furthermore, these personal ties made it possible for workers to redress their grievances by going right up to members of management.

"When New York financiers assumed control of the industrial hierarchy, the social and civic leaders of Yankee City were no longer active in local management. The management of industry was no longer directly tied in with the wider life of the community. This split between management and the community made it possible to mobilize the workers into an organization to fight management."[1]

There was much nostalgia for the past, which further inhibited people's contribution to the present. Then, in the worst year of the depression in the early 1930's, the completely unprecedented and unexpected happened: the shoe workers of Yankee City struck to a man—the most startling manifestation of prevailing dissatisfaction.

"Each of these local men felt what had happened very deeply and some of them were explicit enough about it to say so. We knew some of them well. They were not the weak or unscrupulous men that their opponents made them out to be. Personally, they were men of good reputations in the business world. Some of them had been trained by their own fathers to be community leaders, but their place in the socio-economic structure of Yankee City prevented them from playing this role and each in his own way contributed directly to the defeat of the managerial group. Part of their inaptness was due to their inability to measure up in their own minds to the great men of the past. This was a dead past, glorious and safe, when men knew themselves to be free men and Yankee City was the 'hub of the universe'. This whole period was symbolized in the memories of the workers and management by the names and reputations of the former owners. The lives of these men epitomized the period for all those who remembered. They symbolized the longing of everyone to return to those days when it was possible for one of them, with all his power and prestige, to stop and gently chide Sam Taylor, the cutter, for not calling him by his first name, and he and Sam could talk about 'the trouble in the cutting room'.[2]

"In the worst year of the depression all the workers in all the factories of the principal industry . . . walked out. They struck at management with little or no

[1] Ibid., pp. 40—4.
[2] Ibid., pp. 40—1.

warning; they struck with such impact that all the factories closed and no worker remained at his bench. Management had said they would never strike, for the workers of Yankee City were sensible, dependable, and, by a long peaceful history, had proved that they would always stay on the job. Union men outside the city agreed that Yankee City could not be organized and held that the local shoe workers were obstinate and 'always stupid enough to play management's game'. Many of the workers had told us that there would be no strike. Most of the townspeople, from the autocrats of Hill Street to the people on city welfare in the clam flats, said Yankee City workers would never strike. But they did—the foreigners and the Yankees of 10 generations—the men and the women, the very old and the very young. Jews and Gentiles, Catholics and Protestants, the whole heterogeneous mass of workers left their benches and in a few hours wiped out most of the basic productive system from which Yankee City earned its living."[1]

THE ABSENCE OF COMMUNITY: A CASE

Perhaps yet more typical of the twentieth century than the disintegration of an established community is what we may call the "absence" of a community.

In Yankee City the factories had been integrated with the surrounding community to form the basis of co-operation; and when this basis had disintegrated, co-operation had ceased. Community can be completely absent when large numbers of people from many places and many walks of life rapidly converge for work or some other limited purpose. They have yet to form a community, an association from which they can draw basic satisfactions. War and sudden spurts of rearmament provide extreme examples of such social vacua. To a lesser degree it is a common experience, particularly in large towns.

We propose again to concentrate on one example—a wartime study by Elton Mayo and George F. F. Lombard of problems in the aircraft industry of Southern California.[2]

For two or three years the industry grew with fantastic rapidity. As one executive put it, it was more than a mushroom growth, "it was an explosion". One works, for instance, increased its personnel from 3,000 to 49,000 in less than three years. A community which, only a few decades previously, had hardly been industrial at all suddenly became a teeming industrial centre.

The dominating feature in this situation was the failure of large numbers of people to settle down anywhere, at work or outside, for any considerable length of time. There was constant coming and going, a constant state of flux. This affected not merely those who were on the move, many of whom had no chance to become effective members of important social groupings or to join others in initiating new and lasting associations. The flux affected also the existing communities, since they had constantly to adjust to newcomers.

[1] Ibid., p. 22.

[2] *Teamwork and Labour Turnover in the Aircraft Industry of Southern California*, 1944, Boston, Massachusetts, Graduate School of Business Administration, Harvard University, Research Study No. 32.

This state of flux existed both inside and outside the factories. The situation was aggravated by conscription. The armed forces naturally tended to deprive the communities and factories of just those men "whose human associative capacities served to hold working teams together".

"The available numerical indications of mobility almost certainly underestimated the problem. In one district alone, Los Angeles, the number of 'in-migrants' during 1943 was authoratively estimated at 300,000. In the same period between 185,000 and 200,000 persons left the district; so that three entered for every one who stayed.

"The unsettled character of the community is not limited to in-migrants; intra-state and . . . intra-plant movement is extensive. The following table gives figures compiled by the War Manpower Commission on movement within Los Angeles County from March through October.

Availability Statistics for Los Angeles County, March-October 1943

Availability Certificates (i.e. permission for individuals to change jobs) issued by War Manpower Commission, Los Angeles	794,899
Residents entering labour market	221,912
In-migrants	179,814
Transfers from less essential industries	189,119

"In addition, approximately 200,000 availability certificates were given to workers by their employers." In brief, in a district with a population of 3,508,873 (1940), approximately 1,500,000 people—probably more—entered war production employment at one time or another in the period March-October 1943.

Within the factories, workers tended to be interchanged rapidly and working groups were continuously broken up. In one works employing about 40,000, for instance, changes in personnel in 1943 were as follows:

	No. of changes	*% of 1943 Average personnel (41,179 = 100 %)*
Clear-outs	31,104	75
Transfers	65,114	157
Loans (approx.)	150,000	360
Total changes	246,218	592

"These figures take no account of movements of workers within a department occasioned by absences and work changes. It is impossible to estimate the number of these changes with reasonable accuracy. Nevertheless, the figures suffice to show that changes of actual work within a sufficiently typical plant during 1943 amounted to approximately 600 per cent" [1]—an average of six changes for each worker employed.

The outstanding effect of this failure of people to participate in lasting social groupings, was widespread unhappiness, "emptiness",

[1] Ibid., pp. 5—6, 8.

planlessness—a state of what Durkheim called *anomie*. As in Yankee City, there was much nostalgia for what they had left behind. In Yankee City the workers expressed their feelings most clearly by striking. In the aircraft industry of Southern California during the war the workers expressed their feelings in other forms of absence—by moving from job to job and by staying away from work. Labour turnover and absenteeism were at very high levels, even although rates of pay and conditions were almost the same in all factories. Nowhere were the wages high. The instances of personal unhappiness through loneliness and through the complete absence of a sense of belonging were legion. Interviews with leavers, and with other workers at random, gave a picture of a people without a community.

"The first observation from these interviews must be the wide range of persons employed—young and old, with mechanical experience and without, persons with family problems and solitary individuals. Among them were many who became 'turnover' because for them their work was only a part of their total life, all the demands of which they had to keep in balance. For instance, many of the younger women had husbands in this or that branch of the services and tended to follow them from station to station. Other women were compelled to be absent from, or to give up, industrial employment by reason of young families that ran into trouble of one kind or other when left without direction during day or night.

"Officers of the War Manpower Commission told us that in 1942 and 1943 the airplane was the 'glamour girl' of industry. The in-migrant with a family usually took a job before he had found a home; in very many instances, probably the majority, this job was in an aircraft plant. He then discovered that he could not get suitable quarters for the family near the plant; sometimes he had to live as far as 20 miles from his work. Subsequently he found work less distant from his base. Frequently, we were told, in-migrants made three moves before settling down. . . .

"The second observation must be that native Californians seemed to be in the minority, and many of the in-migrants from other states compared the somewhat casual social attitude of Californians unfavourably with that characteristic of the smaller and more closely knit communities from which they came. This was the more true the greater the difference." [1]

THE INTERDEPENDENCE OF FORCES INSIDE AND OUTSIDE INDUSTRY

The two cases examined above—Yankee City and the aircraft industry of Southern California—have several basic features in common. Inside the factories, both are characterized by the absence of a craft hierarchy and of a continuous process by which attitudes, customs and social skills are passed from generation to generation; by increasingly tenuous contact between workers and employers; and by a widening gap between industry and its social environment. To these the California study adds a high rate of mobility. Both cases show such signs of social sickness as widespread insecurity, persistent nostalgia, considerable resentment and occasional open hostility. Finally, and perhaps most important of all, none of these failures in industry is made

[1] Ibid., pp. 23—4.

good in the communities outside. On the contrary, the communities take on similar features.

Workers and citizens are the same people; inevitably they carry social disruption to and fro. In this sense industry and its social environment cannot be separated; and the term social disruption describes the nature of a relationship, not its absence.

Some features outside industry exercise a similar effect. For example:

Education

"Education for life" has become a catch-phrase. In fact, education has ceased to be a continuous integrated process and lacks some parts essential to a full life altogether. People are subjected to confused and often conflicting influences by family, school, club, factory, and more specific institutions, and finally by being thrown on their own resources. This is well reflected in the contrast which is frequently—and quite fallaciously—drawn between the period of schooling as one of social dependence, and of maturity as one of social independence. In fact, as Sabine puts it, "morality does not develop as an attribute of personality which is later applied to social situations. It develops first in social situations, and takes form in actual personal inter-relationships, and to a great extent it requires for its maintenance the continuing support of such relationships".[1] But people lack community, and therefore do not have substantial relationships. Dewey points out that "the idea of education as preparation and of adulthood as a fixed limit of growth are two sides of the same obnoxious untruth. If the moral business of the adult as well as the young is a growing and developing experience, then the instruction that comes from social dependencies and inter-dependencies is as important for the adult as for the child. Moral independence for the adult means arrest of growth; isolation means induration. We exaggerate the intellectual dependence of childhood so that children are too much kept in leading strings, and then we exaggerate the independence of adult life from intimacy of contacts and communication with others".[2]

The attempts to extend formal education to include adults is tacit acknowledgement of this weakness in the social structure. (In industry itself some firms encourage employees to take up studies of a general character—as distinct from technical and vocational—by paying their tuition fees.) But they cannot solve the central problem, which is to fill the gap in what is essentially "education for responsibility".[3] This a well-functioning community provides as a matter of routine.

1 Op. cit.

2 Dewey, John, *Reconstruction in Philosophy*, 1920, New York, Henry Holt & Co., p. 185.

3 See e.g., Donham, W. B., *Education for Responsible Living*, 1944, Cambridge, Massachusetts, Harvard University Press.

The lack of contact between workers and employers tends to persist in their role of citizens. Even where the enterprise is locally owned and controlled, employers and workers hardly meet. They reside in different parts of the town, belong to different clubs and other institutions, send their children to different schools, have different interests and different ways of following them. (This feature is also tacitly acknowledged. For instance, in Great Britain, much new housing development is planned so that it can accommodate "mixed communities". But this attempt to solve the problem by physical approximation may be rather like putting the cart before the horse.) There is generally a lack of appreciation of the function of the factory as a social institution. Unlike social institutions of the past, where rituals and customs sustained social roles, modern industrial organizations tend to reward little more than economic function with little more than economic rewards.[1] Unintegrated into local communities, industrial control passes increasingly into distant offices whence people without roots apply increasingly uniform considerations to the diverse needs of various localities.

Similarly other institutions. Churches, local government, charities decline or become impersonal through sectional and absentee control. The institutions are less and less able to support community satisfactions. New norms and ideologies grow around the vacua they leave. They also draw fewer and fewer people. The process is a vicious circle.

The trade unions are of particularly great relevance to our study. They are important social institutions in many ways. The activities which are peculiarly theirs—bargaining with management and care of sick and indigent members—point to the scope for responsible co-operative action in local groups; the local strike is a most remarkable manifestation of cohesion and tenacity in face of loss of wages and other threats. Many unions could become more of a social institution. But these possibilities do not reverse the trend which limits the social function of the trade unions. Like many institutions with limited local responsibilities, they find it difficult to secure the routine participation of their members. Usually no more than three or four per cent of local membership attends union meetings—which points simply to the fact that the place where men gather daily is their place of work rather than their union hall. And in their efforts to protect their members economically and politically, the trades unions are not easily able to be primarily concerned with assisting the integration of the worker and his work in his particular working place.

In short, the community loses its balance. Becoming more specialized

[1] See e.g., Selekman, B. M., *Labour Relations and Human Relations*, 1947, New York, McGraw-Hill Book Co.

in its economic production, and required to accommodate itself to standards devised elsewhere, it tends to be deprived of responsibility for many of the primary needs of its members.

Social Mobility

The California study indicated the amount of movement which took place outside the factories as well as inside them. Frequent changes of address are typical of industrial society. J. S. Plant, reporting a study of changes of address in a fairly typical and relatively "stable" county in New Jersey, states that 68 per cent of the families moved at least once in the five-year period 1922-1927.[1]

Americans have been foremost in developing a kind of faith in uncertainty and in their capacity to adapt to ever-changing circumstances. Everybody is expected to feel immediately at ease with everybody else. Beyond the ground of citizenship, status is confused. The costs of adaptation, which Janet regarded as "the most complex human activity . . . by far the heaviest burden on human capacities",[2] mount ever higher. In the aircraft industry of Southern California, rapid movement from job to job increased the strain to which moving was the temporary answer. The same is true of a high rate of mobility outside industry. The sense of belonging is so diluted that it comes near to having no meaning.

The Americans themselves are uneasy about this state of affairs. Their uneasiness is reflected in their intense interest in social science, particularly in psychiatry. It is reflected also in much modern literature. Mr. J. P. Marquand, for instance, sketches the middle-class American as he tries "to adjust his life within the limits of a constantly changing frame":[3] secure in neither his community nor his place of work; nagged by carefully concealed worries over his status and income; compelled to increase his expenditure directly his income expands; permanently cut off from the community of his roots and origins: without point of reference, his goals constantly shifting and never achieved; leading a life, in short, which would probably seem incomprehensible to societies in which satisfying and resilient, stable and secure relationships are built up in the course of generations.

Social Sickness

The desire for community satisfactions is thus continuously frustrated in modern society. Human association tends to be inadequate. Opportunities for it are not merely infrequent but often make varied, sometimes conflicting, and almost invariably unknown demands on

[1] *Personality and the Cultural Pattern*, 1937, New York, The Commonwealth Fund, p. 106.
[2] *Les Névroses*, 1909, Paris, Ernest Flammarion, p. 255. For detailed expositions of these costs, see, for instance, the writings of Dunbar, Halliday, Horney, Mayo and Plant.
[3] *Point of No Return*, Boston, Massachusetts, Little, Brown & Co., p. 119.

potential members. Emotional and mental growth is discontinuous, with little experience in participation and little adeptness in social skills. But the desire for continuous, intimate, purposeful association with others remains strong. This is the final contribution to the vicious circle that leads to disintegration and social disaster. For, as Mayo saw: "It is the modern tragedy that the very strength of this persistent desire makes against, rather than for, effective co-operation".[1]

Mayo explains: "This occurs in two ways. The first is shown in the apparent increase of obsessive thinking. This has been studied by Janet, by Freud, and by the whole mental hygiene movement in this country (U.S.A.). The so-called maladjustment to which these authorities trace the origin of obsession is a social maladjustment. It expresses the strenuous and ineffective efforts of an unhappy individual to relate himself effectively to other persons, when he has not been trained to such relationships. Realization of his own ineffectiveness leads him to overthink the problem, to press too impatiently for some immediate and miraculous solution and to collapse into depression when his efforts almost certainly fail. The other way in which the persistence of an instinct for association shows itself is perhaps even more important. There is no statistic to verify the estimate of a large increase in extreme cases of obsession, though all the authorities believe it. But, even if it is so, the consequent problem is small by comparison with that which arises from the intrusion of obsessive ideas into the thinking of persons essentially normal." [2]

The signs of very great individual unhappiness are legion. They range from complete breakdown—suicide or permanent mental illness—through sicknesses with a large psychosomatic component, to the obsessive thinking and the morbid states of dejection which have no statistical tables to themselves. Divorce, delinquency, and the myriad examples of anti-social behaviour not classified as crime, are the repercussions in intimate social relations. More generally the drift is towards autocratic leadership and mass destruction.[3] Men need integration, security, membership of a community. It can no longer be assumed that men will allow anything to stand in their way, will not resort to the most drastic methods, to satisfy this craving or to acknowledge the failure to satisfy it. Totalitarianism in Germany may serve as a warning example. Drucker heard a Nazi agitator proclaim to a wildly cheering meeting: "We don't want lower bread prices, we don't want higher bread prices, we don't want unchanged bread prices, we want National-Socialist bread prices"; and felt that this "came nearer to explaining fascism than anybody I have heard since".[4] Conrad Heiden goes on: "Hitler was able to enslave his own people because he seemed to give them something that even the traditional religions could no longer provide: the belief in a meaning to existence beyond the narrowest self-interest. The real degradation began when people realized that they were in league with the devil, but felt that

[1] Mayo, Foreword to Roethlisberger, *Management and Morale*, p. xxi.
[2] Ibid., pp. xxi—xxii.
[3] Cf. E. Fromm, *The Fear of Freedom*; K. Horney, *The Neurotic Personality of our Time.*
[4] *The End of Economic Man*, 1939, New York, John Day Company, pp. 13—14.

even the devil was preferable to the emptiness of an existence which lacked a larger significance". And Heiden concludes: "Until that problem is solved, the annihilation of Nazism will be no more than the removal of one symptom of the world unrest".[1]

Bertrand Russell reminds us: "Do not imagine that . . . you are by nature more virtuous than the people in the lawless communities. If from an early age you had lived in such a community, it is ten to one that you would have become a thief. We do not steal, not only because we are persuaded that it is wicked to steal, but also because it is against our interest to do so."

He goes on to quote the case of two boys who had a passionate desire to go to sea, were prevented from doing so, and henceforth systematically indulged in anti-social behaviour: "For trivial offences at an early age they were put in the care of the probation officer, who did not recognize the importance of allowing them to do the sort of work in which they felt a natural interest. Both these boys, one feels, if they had been allowed to go to sea, would have become honest and decent sailors. As it was, feeling thwarted and angry, they took to a life of crime, and, in spite of constant sentences, persisted in it." [2]

A particularly ironic result of inadequate community satisfactions is that in a period of increasingly rapid technological change and increasingly wide economic possibilities, people find it more and more difficult to adapt. The urge is towards stability and security. The impossibility of reverting to past forms of security is acknowledged at the intellectual level. Yet, scarcely beneath all the flux and change, new rigidities of caste and specialization—the features Toynbee attributed to arrested civilizations[3]—develop out of man's search for security. No longer members of living communities, officers and workers of increasingly large organizations make contact—tenuous and ineffective contact—only up and down through the intricate maze of hierarchies. The unions, prepared no longer to let technological advance be bought at the price of individual security, seek to stem the tide of change with "feather-bedding", cast-iron specialization and open hostility. Management retires into a hard shell of hurt feelings and political bitterness. And government seeks to assuage all fear of uncertainty by installing economic security. Amidst the overwhelming complexity of it all, the individual seeks instinctively for a community of which membership would be meaningful enough to capture his loyalties and give him the security which enables him to adapt.

Mayo sums up like this: "The issue the civilized world is facing now is a rapid industrial, mechanical physiochemical advance, so rapid that it has been destructive of all the historic social and personal relationships. . . . While material efficiency has been increasing for 200 years the human capacity for working together has in the same period continuously diminished. . . . Our capacity to work together in a war of survival is a measure of the capacity for routine co-operation that we have lost. Some essential determinant of the order in human affairs has been left

[1] *Der Führer*, 1944, Boston, Massachusetts, Houghton Mifflin Company, Postscript.
[2] Broadcast talk on "Crime and Community", reprinted in *The Listener*, 1 June 1950, p. 939.
[3] See the abridged edition (Ed. D. C. Somervell) of his *A Study of History*, 1947, Oxford University Press, p. 182.

out of account. We have, in a word, moved out of the established society of our forefathers into the fast-moving adaptive society of the present without the capacity—yet—to adapt." [1]

THE CHALLENGE TO INDUSTRY

We may now define our problem more closely. The studies of anthropologists allow of certain "cross-cultural" generalizations—needs and modes of behaviour that men have in common the world over, though they have different ways and forms of expressing them. Among them is the human need we have been discussing, the urge to belong to a real community. As Stuart Chase puts it: "Every normal person needs response from his group. Hermits and recluses are abnormal everywhere".[2] This falls short of our concern in one important respect: we are using the word "community" to denote something bigger than a "group"; and a "group" is not invariably, in fact is often not, a part of a real community. We shall return to this point in some detail later.[3] The emphasis on the need for effective group membership is of primary importance and will suffice here.

Mayo points out that every social group must in fact deal with two recurrent problems: "It must secure for its individual and group membership: (1) The satisfaction of material and economic needs. (2) The maintenance of spontaneous co-operation throughout the organization".[4]

We have seen how industrial development tends to split these social and economic aspects of community functioning. In established communities they are completely interwoven. In industrial society they tend to be treated separately; or, rather, considerations of community are neglected, often disdained. Industry is preoccupied with absorbing and exploiting new sources of energy and new technics. Man is assumed to be "economic" man. Dissatisfaction is attributed to the workers' inherent dislike of work, which the employer seeks to mitigate by what is known as "welfare". There is no suggestion that the work routines themselves or the organization of men ought to have the function also of maintaining spontaneous co-operation, of maintaining a sense of belonging. Spontaneous co-operation is assumed to maintain itself.

We are becoming familiar with the result, and the nature of the breakdown is becoming clearer. Accepted routines and institutions atrophy through disuse. Personal maladjustment increases and can be traced to the disruption and absence of community. Services have

[1] Mayo, quoted in *Fortune*, "The Fruitful Errors of Elton Mayo", November 1946, Vol. XXXIV, No. 5, p. 41.
[2] *The Proper Study of Mankind*, 1948, New York, Harper Brothers, p. 89.
[3] Chapter IV, *passim*.
[4] *The Social Problems of an Industrial Civilization*, p. 9.

grown up to aid the social casualties. But often the therapist can only wonder whether "there is any longer a social order to which the patient may adjust".[1] Neglecting its social environment, industry fails to provide the satisfaction of several important human needs. And the environment, deprived of the full benefits of its economic resources, does not add up to a community and cannot provide lasting activity of a kind to bind men together.

The assumption that spontaneous co-operation maintains itself is in fact the precise opposite of that found by anthropologists—constant "rediscoverers of the normal"—in primitive communities, and by historians in earlier Western society. Spontaneous co-operation never maintains itself. It has always to be supported by generally accepted routines and institutions.

"Then a whole village, young men and old, freemen and villeins, was called out to reap the lord's corn and was rewarded by a dinner given by the lord. But in a modern factory, work and pleasurable social life are conceived to be two different things. There is a proper time to go to the factory to work, not to enjoy the society of their fellows. Sometimes they are not even allowed to talk. Conviviality is for after hours." [2]

"The primitive leader assumes that if he maintains the discipline imposed by tradition there will be few economic problems. Today we make the contrary assumption. We assume that if we understand intelligently the conditions necessary for the getting of raw materials and the technical production and distribution of goods, we need to give but little attention to the problems involved in collaborative effort; that is, the human problems of effective and meaningful association at work will take care of themselves." [3]

Because of our failure to recognize this, as Roethlisberger says, "we have the goods but the natives have the morale". And he could have added that we do not produce nearly as much wealth as we might, and waste much of what we have. He goes on: "However, it is much easier to see the absurdity of primitive belief than to see the absurdity of our own. It seems obvious to our logical ways of thinking that no ritualistic performance of certain ceremonials can bring forth the rain that is necessary for the successful growing of crops. It is less obvious that the application of science to agriculture does not in itself provide the basis for meaningful human association at work." [4]

Can this be changed? Is rapid technological change and increasing wealth compatible with full community satisfactions? Can factories, offices and shops, the only places aside from the homes where people gather frequently and regularly for purposeful activity, avoid destroying the sense of belonging and help new communities to grow?

Some think not. Mr. T. S. Eliot concludes that it is essential to any endurable culture that "the great majority of humans go on living in

[1] J. S. Plant, quoted by Mayo, *The Human Problems of an Industrial Civilization*, p. 135.
[2] Homans, op. cit., p. 348.
[3] Roethlisberger, F. J., *Management and Morale*, 1942, Cambridge, Massachusetts University Press, p. 53.
[4] Roethlisberger, op. cit., p. 66.

the place in which they were born", and that regional loyalties must be fixed and strong in order to provide vital "friction between its parts". Santayana confirms Eliot's judgment: "Fixity of tradition, of custom, of language is perhaps a pre-requisite to complete harmony in life and mind. Variety in these matters is a lesson to the philosopher and drives him into the cold arms of reason; but it confuses the poet and the saint, and embitters society."[1] The experience of Germany would seem to bear out this view. The effect of drastic change there so embittered society as to lead it, in Mr. Walter Lippmann's striking phrase, to "welcome manacles to prevent its hand shaking".

Others are more hopeful. They point to the sense of belonging still in evidence in many places, and to the capacity for co-operation shown suddenly in the war-time towns and factories and on the battlefields. They take heart from the fact that the healthy growth of real communities, like their decline, is a cumulative process; that, in the one as in the other, one step leads to another.

Two very recent examples of the sense of belonging under extreme conditions must suffice. In a U.S. Army Medical Department report, Major Raymond Sobel analyses the final crack-ups of 50 seasoned men who had outlasted most of their fellow soldiers through battle after battle before breaking. There the question was not, "why did they break?", but "why did they continue to endure?" Of the final five cushions against breaking, "distant ideals" was the first, "hatred of the enemy" the second, faith in making just the next hill the third, and pride the fourth. The fifth, the ultimate strength of these men, the last and greatest source of mental and nervous integrity in the face of terrific danger, was "loyalty to the group".

An Estonian refugee gave this impression of what it meant to regain one's personality through membership of an effective group: "For months we wandered. I lost all sense of being a person.... And then suddenly we were in one of the army's assembly centres and you asked my husband to direct the education of the camp and me to run the sewing-room, and kindergartens, and schools sprang into being and Sunday concerts, and we were all personalities again."[2]

Can modern industry with its repetitive processes, rapid changes, specialization and large size, provide community satisfactions and be well integrated with its social environment to form a balanced, a real community? One thing we can say for certain. If spontaneous co-operation did not maintain itself even in much simpler societies, certainly *collaboration in an industrial society cannot be left to chance.*[3] Where factories, shops and offices are the typical meeting ground, it is in them that people look for community satisfactions. This study is focused on them in the search for ways in which men may there find "a meaning to existence short of league with the devil", and may earn their living by producing commodities as members of real communities.

[1] *Persons and Places*, 1944, New York, Charles Scribner, p. 103.
[2] Quoted by Francesca Wilson in a broadcast talk on "The Great Humanitarian Effort", reprinted in the *Listener*, 10 August 1950, p. 139.
[3] Mayo, *The Social Problems of an Industrial Civilization*, p. 9.

SUMMARY

The purpose of this chapter has been to describe in detail the disruption of community life which so often characterizes modern industrial civilization. Subsequent chapters will suggest methods by which some work-places have either helped to prevent disruption of the communities in which they were located, or have helped new communities to grow. Industry cannot do the job alone; it must work in co-operation with trades unions and other institutions. We shall merely try to describe industry's part in this total effort.

Men require two things, not one, for the full life as we conceive of it today; (1) commodities and (2) communities. In the emphasis on producing the commodities, we have forgotten that it also requires thought and effort to make communities. It may have been true once that healthy communities just grew—although evidence casts doubt on the suggestion—certainly it is not true now. The task of every society, then, is two fold: to produce commodities *and* to develop communities. Wherever it springs up, industry becomes a major institution and the most common meeting place of people, and therefore it must assume a large share of the two fold task.

This is a point of particular urgency to industrializing communities. By studying the experiences described in the present volume, and others, they may learn how to avoid serious mistakes that make industry destructive of communities however productive it may be of commodities.

II. TWELVE EUROPEAN STUDIES

"*. . . The object of the (industrial) undertaking is the achievement of a certain common advantage. . . . In attachment to their community, men find themselves free. . . .*"

Belgian Study

Twelve studies were carried out during 1950 for inclusion in this volume, two in each of six European countries (Belgium, France, Great Britain, Italy, Sweden and Switzerland). The persons entrusted with carrying out the studies were asked to choose organizations for study which were "characterized not only by lack of conflict, but by positive symptoms of adaptation to both the internal and external needs". In the event the studies relate to organizations diverse in many respects: in size—from 200 to 5,000 workers; in the nature of the work—metal, textile and chemical factories as well as a coal-mine and a department store; in age—one firm had a history of over 100 years, another, one of only a generation; in the surroundings—medium-sized and large towns as well as in remote villages; in the type of staff—some firms employed mainly men; others, women; etc.

Broadly speaking, the 12 studies fall into two groups: organizations which helped to maintain a community—contributed to the growth and development of a sense of community already in existence—and organizations which played a leading role in the creation of a sense of community where none had existed. There are seven organizations in the first group and five in the second, as follows:

Country	*Community maintained*	*Community fostered*
Belgium	Metal Works of L. Bakaert.	
	Chemical Works of Solvay & Co.	
France	Textile Finishing Works of Shaeffer.	Electrical Equipment Works of Telemecanique Electrique.
Great Britain	Burncoal Colliery.	Sock Manufacturing Company.

Country	*Community maintained*	*Community fostered*
Italy	Office Machinery Works of C. Olivetti, Ltd.	Artificial Fibres Works of Cica Viscosa.
Sweden		Metal Engineering Co. Textile Manufacturing Co.
Switzerland	Machine Tools Co. Zürich Department Store.	

The first group of companies may be thought of as helping to prevent the social disintegration represented by the case of Yankee City in Chapter I, the second as filling the kind of social or community gap represented by the Southern California case in Chapter I.

1. COMMUNITY MAINTAINED

The group of seven organizations which helped to maintain communities can be usefully divided into two sub-groups: the first comprises four organizations which helped to maintain a generally stable community; the second, three organizations which relied on the stable elements of a generally disintegrating community.

FOUR ORGANIZATIONS WHICH HELPED TO MAINTAIN STABLE COMMUNITIES

1 *Country*	*2* *Type of work*	*3* *Age of organization*	*4* *Size of organization*	*5* *Size of community*	*6* *Trade Union membership*	*7* *Strength of administrative structure*
		years	*numbers employed*	*numbers of population*	*% of 4*	*% of 4*
Belgium	Metal Manuf.	70	1,130	8,500	65	11
France	Textile Finishing	62	600	2,000	0 [1]	13
Italy	Office Machinery Manuf.	42	5,000	8,700 [2]	Not known	16
Switzerland	Machine Tool Manuf.	83	1,025	2,900	29	23

[1] The staff belong to a Staff Association.
[2] Commune; the population of the town is approximately 8,700 and of the whole district approximately 162,000.

The communities in which these factories are situated have many aspects in common. Even the Office Machinery Manufacturing Company, which draws a considerable proportion of its staff from afar—its bus service alone transports 500 workers every day—is surrounded by a stable, diversified community.

The integration of the small community is well described in the Swiss study:

"The village has 2,900 inhabitants, most of whom are Protestants . . . the factory employs over 1,000 persons; even if one takes into account workers who come from neighbouring villages, it will immediately be realized that, directly or indirectly, the whole village lives on the work of the undertaking. This fact is important, for it means that the community within the undertaking is at one with the community to which the workers belong when they leave the factory. The workshop comrade is also the neighbour whom one meets during one's leisure hours, in the street, at the café, or at any of the local societies. One belongs to the same religious community, to the same military unit; many links are thus added to those, more fragile perhaps, which come into being through association at work."

Many of the workers at the Belgian and Italian factories supplement their industrial earnings by other gainful occupations, such as farming or running a retail business. For this they usually enlist the help of their families.

". . . the peasant who tills a few fields—holdings are small in Flanders—adds to the revenue from his fields his salary as a factory worker. The factory worker does not want to be outdone, and adds to his salary earnings derived from a retail shop or a business with several hundred head of poultry. The visitor will see that a business or some form of agricultural activity is connected with every house, this being facilitated by the many children which one finds in every family. This explains the large number of small concerns, textile and other, employing from 6 to 100 persons, which are to be found in the neighbourhood.

"The money thus acquired is used to improve the standard of living. Before 1914, two-storey houses were rare. Today, one can count those which have only a ground floor. The villages have an air of well-being; new, bright, red-tiled roofs show that the owners do not wait until it is too late to repair, improve or preserve. At Zwevegem, the homes are almost luxurious, the shops well stocked. In this locality, which might be thought to be isolated, we saw a shop window in which were exhibited six of the latest model American washing machines. And they find buyers." (Belgium)

"Almost every farming family here has a property, which it cultivates first of all for its own support and then to supply vegetables and other crops for commerce. Many of these farmers work in the factories in the towns, whilst their wives and other members of their family take care of the farmwork. When their factory work is over they devote all their spare hours to the work of their fields. . . . Textile and mechanical factories are the most important here: they occupy large and modern premises and employ a large number of people. There are also many small industries and laboratories of skilled artisans, who supply almost all the objects necessary for domestic life and daily work, so that it is not rare to hear people talk about the possibility of complete economical self-sufficiency of the Cavanese, or hear them talk of the Cavanese as of a small, natural community." (Italy)

The Belgian study sums up the main characteristics of the people in the factory like this:

"These men are not uprooted, floating beings. They remain attached to their family, their community, their native land. And it is thanks to this attachment that they feel themselves free. . . ."

The Growth of Industry

The organizations are all, except one, family businesses which have grown from small beginnings to their present size in the same localities. The Belgian study describes the process as follows:

"Its origin is quite simple. The business was founded by Mr. Bekaert in his native village of Zwevegem, where he ran an ironmongery. Its beginnings were modest: for a number of years, the firm's clientele was only regional. Thanks to the spirit of enterprise and to the energy of its founder, it soon began to acquire a certain importance. After his death, it was transferred to his children. His two sons both took an active interest in it. One of them, who has since died, devoted himself more particularly to production; the other, M. Leon Antoine Bekaert, the present manager, doctor of law, had turned towards external problems. He now owns the business in partnership with his three sisters and his brother's family. His brothers-in-law and his son-in-law are also interested in it."

The French factory was built in 1820 and housed a paper-making plant and then a spinning and weaving business before becoming a concern for textile bleaching, dyeing and printing. The Swiss factory, started in 1867, employed only 20 persons by 1873. The original workers were mainly established craftsmen whose place of work changed—and initially changed not so very much—from the small shop at home to the bigger workshop. Modernization of work premises had been effected gradually and was continuing.

Care has been taken to respect the habits of the community—in Switzerland, for instance, where married women are not employed as a rule, none are employed in the factory. Again:

". . . the canteen is used mostly by workers from neighbouring villages who wish to avoid the additional fatigue of journeys to and from their home. All attempts to introduce an uninterrupted working day have failed in the face of the workers' determination to go home for their mid-day meal."

The Italian firm provides special bus services between noon and two o'clock in the afternoon to enable workers who wish to get home for their meal, to do so.

Recruiting, like promotion and ownership, has been to a large extent automatic: successive generations of workers have filled the jobs. The Belgian study, for example, records that:

"Many sons and grandsons of workers are to be found in the factory, because, usually, when leaving school, one goes into Bekaert's. The staff includes whole families. There are the six brothers Gabey, the nine Beunens brothers and brothers-in-law; all have many children. There are about 15 Vande Kerchoves, all brothers, uncles, nephews or cousins. They are real tribes who feel themselves to be strong, and in which the elders advise and discipline the young."

When recruiting additional workers, the family background and local circumstances are taken into account.

"The firm is exacting and, before engaging staff, seeks information about the family: are they sober and industrious? does the mother or wife manage her household well? does she educate her children? how do the parents behave?

"The aim is to recruit young workers. When they can be taken on at the age of 15 or 16, they can be trained in the spirit of the factory, and they frequently remain there all their life. If they are not recruited when young, they often go into the textile industry, that is to say, in the factories of the Roubaix-Tourcoing area (North of France) . . . the daily crossing of the frontier creates a smuggling mentality, encourages traffic in cigarettes, alcohol, perfumes, etc., and fosters the taste for illicit gain. The morality of the workers is thereby affected." (Belgium)

The Swiss factory "arranges occasional meetings with the parents of the apprentices, to exchange impressions about the results of the apprenticeship, and to discuss with them the manner in which the youths should be guided, not only at the factory, but in their own homes".

It is thus an achievement to belong to the factory, and workers leave rarely except to go into family businesses of their own or to leave the locality. This is most strikingly shown in the Swiss study: the factory has:

"Seventy persons with over 40 years' service; 180 persons with between 30 and 40 years' service; 250 persons with between 20 and 30 years' service. In all, there are about 500 persons with more than 20 years' service, that is about 50 per cent of the total staff.

"Living in a valley where generation after generation has worked in the factory, the worker knows the heads, he knows what they have done in difficult times, he places his trust in them, knowing that everything which can be done is done automatically or can be obtained through the normal channel of the Staff Association within the undertaking."

Internal Organization and Management

The concerns have tended to remain "one-man" businesses with final responsibility residing in the director who is also part-owner. In the Belgian, French and Swiss organizations, he has continued to exercise personal control over the affairs of his business and he relies largely on personal contact with all his staff.

"There is no board of directors, all decisions being taken by the head of the undertaking himself on the basis of information placed before him by his principal assistants. The latter meet regularly every week in order to make a survey of the general situation, and to co-ordinate their action." (Switzerland)

"M. Leon A. Bekaert, takes final responsibility for all decisions. Today, as in earlier times, and despite the increased labour force, he exercises direct control over the foremen.

"He is, of course, assisted by several colleagues, who share the technical, commercial, financial, administrative and welfare duties among them. This team is the principal element in the undertaking; it consists mainly of devoted men, most of them self-made, who started working in the business in their youth, who have become attached to it, and who have seen their position improve along with that of the firm." (Belgium)

The organization of the firm has tended to remain very flexible. Functions have not been divided into watertight compartments but have been to a large extent allocated by habitual practice developing into special skills. There were usually no organization charts. Co-ordination tended to be effected by personal contact. The Belgian study described some of this routine contact as follows:

"Every morning, the heads of departments open the mail together, so that everybody is immediately informed about everything which concerns the business. Mr. Bekaert then discusses for about an hour current problems and activities. He himself deals with the purchase of machine wire (basic raw material) as he believes that—thanks to his personal connexions—he can secure the best terms.

"Then, during the morning, the engineers and the foremen make their reports, under the chairmanship of the head of the technical department; here again, problems affecting two or three sections are solved in common."

Immediate responsibility is delegated right down to the foremen and workers. Departmental managers tend to be held responsible for everything that goes on in their departments, and similarly with foremen and workers. The philosophy behind this was well expressed by the head of the Swiss factory:

"... if the chief wants the workers to trust him, he must first of all trust them. If this implies a risk, I have not hesitated to take it, and I have never regretted doing so."

Part and parcel of this policy have been attempts, mentioned in the Swiss study:

"... to suppress the 'pin-pricks' which continually irritate workers, without any real justification. Such is the reason for the suppression of time-checks on entering and leaving, and for the drafting of new work rules, which include a minimum of prohibitions. Existing rules have also been investigated to see if it was really possible to respect them."

The rules forbid the by-passing of immediate supervisors. Even where, as in the Belgian factory, the workers are organized in a national trade union and have a works committee which meets every week, the head insists that workers and their representatives report in the first instance to their foremen.

"... no reports or requests submitted by the staff to the management, either individually or at meetings, or through their trade union representatives, are ever considered without the engineer or the foreman concerned having been previously consulted and given the opportunity of expressing his opinion.... The strict application of this rule avoids many difficulties."

In the Swiss factory the immediate superior is responsible even for dismissals; the director, who is mainly responsible for personnel matters, does not possess the right to interfere. In the Belgian firm the social welfare department is under the charge of the head of one of the commercial sections.

There is continual stress on the responsibility of the workers, collectively and individually. It has been generally left open to them whether or not to join a trade union. The Belgian firm has encouraged them to do so; and when they were asked by their fellow unions to stage a nation-wide strike in 1948, the director encouraged them to take part, since the conflict, as he put it, was beyond the firm.

In both the Belgian and Swiss factories increasing emphasis has been placed on the work of responsible teams or groups of workers. The Belgian factory ceased to recruit foremen in the 1920's and transferred immediate responsibility to "brigadiers" or group leaders of between 20 and 30 men. The Swiss firm has been experimenting successfully with a form of profit-sharing with groups of workers. The chairman of the work's committee spoke about it in the following terms:

"The introduction of common agreements in the work carried out by groups has brought about remarkable results. Instead of working merely for himself, without any thought of his neighbour, the workers co-operating in a group help one another, they are all responsible together for the group's output, which has increased, and work on the basis of association has altered the spirit of the teams, where work is now carried out with visible interest and satisfaction."

Briefly, the scheme is a particular application of the principle of autonomous teams favoured by Hyacinthe Dubreuil. For instance, the trimmers of all varnished parts and all the staff employed on painting are paid a group share of the profits, no individual receiving an hourly or daily wage. An agreement between the group and the firm covers such matters as the appointing of a representative of the community (i.e. group), preparation of work, transport of heavy parts. The group profits are allotted to individuals in the group by a points system. An improvement in work methods suggested by a member of the group, if accepted and applied, is the full property of the team during the first three months. After that, 50 per cent of the gain remains the property of the group, and the other 50 per cent is used to reduce the cost price of the articles produced. If an improvement is introduced by the technical departments or by the management, the time gained is applied to reducing the price, with the proviso that it is not to decrease the earning of the workers.

The Belgian, Italian and Swiss organizations share profits with their employees. In the Belgian and Swiss firms there is no general scheme and the habitual sharing is regarded wholly as a sign of appreciation from the head of the firm. In 1949 every employee of the Swiss factory received a month's salary in this way when the shareholders received their dividends. Before that date it had become customary for the head of the undertaking to call a meeting of the staff's representatives, together with the executives, and to report on the results of the year's trading before issuing a report to the shareholders.

Every year, workers' jubilees are celebrated and their long services

usually rewarded by the firm at gatherings presided over by the head of the undertaking. The director of the French factory uses anniversaries as important occasions on which to make contact with his workers.

"He receives individually every day two or three workers or members of staff on the anniversary of their joining the firm, hands them a gift on behalf of the management, discusses their work with them, and tries to ascertain whether they are satisfied. This personal contact between the management and the lower grades has, apparently, a good influence and sometimes makes it possible to suggest to the immediate superior of the person questioned, measures destined to improve human relations."

Welfare

The most striking feature of the extensive welfare arrangements made by the four firms is their attempt to help the workers and the community generally to meet needs outside the factory. The most comprehensive provision has been made by the Italian firm. The arrangements cover not merely 5,000 employees but also their 10,000 dependents, and some facilities, e.g. the library, are available to people introduced by an employee.

Workers' wives come long distances to visit the factory medical service and to the infants' school, and the factory welfare services are generally well patronized. The following table will give some idea of the firms' medical services in 1949:

Examinations of dependents at the surgery or at home	17,300
Injections	56,600
Treatments for wounds, etc.	12,305
Physiotherapy treatments	7,269
X-ray examinations	2,700
Laboratory analyses	843
Dental treatments	13,525
Total	110,542

Help with housing plays an important part. The management of the Belgian factory conducted a special enquiry into the living conditions of the staff and thereupon negotiated mortgages for needy employees, and supplemented them from its own resources. It has been careful, however, not to give the impression of wishing to limit the freedom of the workers.

"The firm formally recognizes that there is no obligation placed upon the worker to continue his service with the undertaking. Even if he leaves, the conditions of the loan do not undergo any change. In this way his freedom remains intact. Of course, if the worker leaves, the firm no longer helps him in the payment of his annual charges."

The scheme of the Swiss firm is unusual in that the houses are erected at the request of those who are going to live there; they choose architects themselves and take part in the planning.

Firms in small stable communities have not established clubs and services of their own but rather have supported and supplemented community efforts. The following is an extract from the Swiss study:

"... the undertaking has been content to give either occasional or permanent support to any efforts due to individual initiative.... It has, for instance, subsidized the building of two tennis courts, assisted in the building of a mountain chalet for the ski-club, provided uniforms for the musicians of the local band, and so on. In the cultural sphere, it supports an association whose object is to enable the people in the area, which is at a great distance from any of the large centres, to hear great artists and speakers, and to watch the acting of well-known theatrical companies. In a locality which seems completely lost and isolated to those who do not know it well, an astonishing current of artistic interest has thus been created, and men of modest background are able to enjoy the most varied cultural performances."

Participation in the Community

The organizations have endeavoured not merely to fit in with, but also to take a leading part in, community affairs and, conversely, have encouraged the community to share the life of the firm. Thus the Swiss factory regularly organizes tours of the plant for the benefit of the workers' families. The descendants of the founder of the Belgian organization have continued to reside on the spot, despite the expansion of the undertaking and its growing interests elsewhere. They thus preserve the closest contact with the community from which the enterprise sprang. The present owner-director is mayor of the township, as his father was before him.

"They have lived on the spot, a middle-class, simple life, without ostentation, and always in the forefront when it was a question of serving the community. They have helped their fellow citizens who have wished to undertake for themselves some form of industrial activity, and, for example, have advanced funds to certain factories in the area. Their financial independence has often enabled them to help the community."

The local council of the community in which the French factory is situated is composed to a great extent of members of the factory staff.

The Italian firm worked out plans with the civic authorities to reduce the heavy unemployment in the locality towards the end of the last war and since. The firm itself had been forced to keep on its books hundreds of employees for whom there was no work at the time, spreading what work there was over a 28-hour week. Schemes were therefore worked out to send some unemployed to courses of re-training and put others into building yards. In this way unemployment in the firm was greatly reduced within six months. During the following six months, work was planned in the firm for several hundred outside

unemployed. By 1950 it had been possible in this way to find work for some 700, of whom only one-half were previous employees of the company.

Adaptation

While maintaining such strong local attachment, these four firms have grown, at times very rapidly, and have kept in the forefront of technical and commercial change. This applies not only to the ultra-modern Italian factory employing 5,000 people and enjoying a world-wide reputation. The Belgian and Swiss concerns are centres of wide-spread organizations. The Belgian works grew from an enterprise employing 250 persons in 1914 to one employing 900 in 1939 and 1,650 in 1950, and acquired in the process a factory near Brussels for the manufacture of spring mattresses, a steel wire works, and interests in similar businesses elsewhere in Belgium as well as in France and England. The Swiss concern also owns a small factory in Switzerland which makes complementary products and employs about 90 workers, a factory in France employing 700 persons, another in Italy with 70 workers, and a large network of commercial companies responsible for the distribution of the company's products in all the world markets.

The director of the Belgian firm occupies leading positions in industry. He is the head of the federation of metallurgical firms *(Fédération des entreprises de l'industrie des fabrications metalliques—Fabrimetal)* and also president of the association of Belgian Catholic business heads *(Association des patrons catholiques de Belgique)*; he has played a leading role in many international trade negotiations.

Many innovations have been introduced, ranging from the routine use of psychotechnical tests, at least for the higher positions, in all four firms, to complicated machinery and substantial administrative reorganization. The rate of change has been high, but no higher than the factory and community could accept, and it has been achieved with a maximum amount of continuity and a minimum amount of dislocation. One instance described in the Belgian study will sufficiently illustrate this important point:

"Until about 1930, the undertaking did not employ any engineers.The part played by the foremen was all important, each foreman having to manage a relatively important group of workers.

"The need to keep the business up to date in the technical field, in particular with regard to plant and to methods of steel processing, brought about the introduction of engineers. This caused some trouble with the foremen. They are rather proud of their prerogatives, and have remained attached to the older conception which is well expressed by the Flemish word *Ondeermeester* (the master's deputy). They are considered as employees and paid monthly. Much diplomacy was required to make them understand that the introduction and maintenance of new machinery necessitated the presence of persons with such special knowledge as they themselves had not been able to acquire.

"The introduction of engineers—who also are recruited quite young—is carried

out as opportunities occur. On the other hand, no new foremen are being appointed, but only *brigadiers* (team leaders) whose authority is limited to smaller groups of 25 to 30 persons. Of course, the authority of the older foremen has not been affected; a curious proof of the trust placed in them is the fact that the foremen alone have the factory keys, a privilege which the engineers do not enjoy.

"The foremen's club, under the chairmanship of Mr. Bekaert, includes the engineers, who have on the average, four to five years' service."

THREE ORGANIZATIONS WHICH DREW ON THE STABLE ELEMENTS OF DISINTEGRATING COMMUNITIES

The division of the studies into groups is, like most divisions, an arbitrary one. In the previous group the organizations were not situated in wholly stable communities, just as the communities in which the next group are situated are not wholly disintegrated. No such communities exist. But the adjectives "stable" and "disintegrating" point well enough to the two extremes of an imaginary scale, on which our first group would be placed nearer "stable", and the present group between the two.

1	*2*	*3*	*4*	*5*	*6*
Country	*Type of work*	*Age of organization (years)*	*Size of organization (numbers employed)*	*Trade Union membership % of 4*	*Size of administrative structure % of 4*
Belgium	Chemical Manuf.	87	950		
Britain	Coal Mining		1,460	100	5 [1]
Switzerland	Retail Store	43	1,450 [2]		14

[1] This figure takes no account of the administrative structure above pit level; but would not be greatly affected if it did.

[2] The number of "auxiliary workers" varies seasonally from 260 in March to 700 in December. About 40 per cent of the total number employed work in Zürich.

The Stable Elements of Disintegrating Communities

It is significant that the size of the communities of which these three organizations form a part is no longer clear. They all draw workers from one or more localities whose official size would bear little relation to the "real community" in which we are interested here.

The Belgian and Swiss organizations are situated in densely populated areas numbering tens and hundreds of thousands of people. The studies describe the areas like this:

"The business is established in the heart of the Walloon part of Belgium, in a very thickly populated industrial area.

"The industrial basin of Charleroi underwent considerable expansion during the last century, when numerous metallurgical undertakings, glass and other factories were set up in the immediate neighbourhood of the coal mines. . . . Since the beginning of the twentieth century, and in particular, since power has been

transported over great distances, the rate of development has declined. Some industries have been removed to regions with abundant reserves of man-power and with raw materials other than coal, or nearer the big centres of communication.

"The industrial development of the area has other aspects. The process of industrialization has transformed the old villages into semi-urban factory and working class agglomerations; a considerable influx of labour from other parts has contributed to drown ancient customs and local traditions in a heterogeneous complex, in which material preoccupations have fatally emerged as the dominant factor. It has, on the whole, been possible to stabilize this influx of population, but there has nevertheless remained a floating fraction of uprooted persons, who have been ill-integrated and who constitute an ill-satisfied, unstable element."

(Belgium)

"In foreign eyes, Zürich is not really a very large town. And yet . . . many citizens incline to think that the ideal size for Switzerland has already been exceeded, and that the city on the shores of the Limmat is gradually losing its regional characteristics, and is slowly becoming a motley amalgam, where the most varied types of men and women meet without really knowing one another struggling to make for themselves a place in the sun of the industrial and commercial capital. In contrast with the Machine Tools Company, there is here little other community than that of the undertaking, if we except of course—and it is real—that which results from the civic instruction of our people and from their common love of their God, their country and its institutions."

(Switzerland)

The ties between colliery and community have traditionally been strong. This is how the Scottish colliery study describes their significance and how they are being lessened:

"The community surrounding a colliery adjusts itself to the needs of the pit as transmitted to it mainly via the miners themselves. That is, it tends to support the customs and relations at work. In particular, miners' wives are well-known for the interest they take in, and the knowledge they acquire about, their husbands' activities and relationships at the pit; they have many anxieties unburdened on them and interpret them in common-sense terms and with an eye on long-term relationships within and without the pit . . . it has for long been customary to make arrangements in miners' working hours to fit in with community duties and such events as weddings, funerals and club meetings. Welfare institute activities, union meetings, ambulance classes, dramatics, etc., have always played a large part in the miner's life. The manager of the local colliery has himself traditionally been a leader in many of these activities, and his duties as a village 'patriarch' are an essential part of his duties as manager.

" . . . Various unsettling factors have increased the movements of miners from one colliery to another or out of the industry altogether. Motor transport has broken down the physical isolation of mining communities. New employment offers new opportunities to sons and daughters. New housing, pithead baths and canteens and other factors have substantially changed the day's work and the status of miners' wives. Because their duties have lessened, some have even taken on paid work, which further alters the relationship between them and their husbands. National trends have decreased the number of opportunities for responsible work in community affairs. The delegation of more authority to the national union has narrowed the scope of the local branches. Football and racing, the cinema, and visits to the city have to some extent replaced traditional activities. The homogeneity of the community itself has been disturbed by transfer of miners from redundant to developing areas, and by the recruiting of Poles, European volunteer workers and others to the industry. And some miners now live in hostels."

In contrast to most Scottish collieries, Burncoal Colliery was deliberately set up to draw most of its workers from several mining villages situated some miles away and from a town of 16,000 inhabitants. The results have been disturbing in many respects:

"Burncoal Colliery has been unusual from its beginning in that in addition to the men from the village it recruited men from a wide area. In June 1950, only 20 per cent came from the colliery village itself; the rest came from other towns and villages. And these last were fairly well scattered, consisting of at least five distinct districts or groups of villages. It was partly because so many men travelled to the pit by bus that the owners of the colliery installed pithead baths on their own initiative and at their own expense about 20 years ago. (Normally baths were installed by the Miners Welfare Commission.) In the cosmopolitan atmosphere of such a colliery as Burncoal Colliery, the lack of social cohesion is often sorely felt, and it becomes necessary to attempt to counterbalance it in the work situation. The problem is particularly important at Burncoal because it is located in an exceptionally individualistic area, known both for its 'clannishness' and its highly developed social activities and for the tendency of miners there to 'kick up their heels' and go on strike at the slightest provocation. . . .

" . . . As a result (of the dispersion) the possibilities of trouble at Burncoal Colliery are multiplied several times—by as many times as there are other trouble spots from which men travelling daily to Burncoal Colliery can bring in the contagion . . . several collieries in the county have been or will be shut down because they are no longer economic to operate, and this is another source of irritation."

The Belgian, British and Swiss organizations have attempted to recruit their workers from the more settled sections of the changing communities which have been described. They have been helped to do this by being established in the localities for considerable periods, by the kind of work they were offering, and by the implicit or explicit policy of engaging only "the best elements".

"The chemical industry—and consequently Solvay's factory—requires for the handling and the maintenance of its machines a staff with a developed sense of responsibility . . . offering continuous work, day and night, on Sundays and holidays, and generally constant utilization of productive capacity, Solvay's factory necessarily presents a fairly striking contrast to the other firms in the area (coal mines, blast furnaces, steel presses, heavy engineering works, foundries) where economic conditions often necessitate the recruiting or dismissal of large numbers of workers, generally accompanied by fluctuations in wages.

" . . . When one visits the families of members of Solvay's staff in the area, one invariably finds oneself in the homes of middle class people. The order which prevails in the 'front room' where one is received, the evidence of a certain comfort, the preoccupation with good behaviour, the pride with which one is invited to go round with the owner to see the garden—all this discloses a desire for consideration and the enjoyment of a certain standard of comfort, achieved by a daily effort, but also thanks to continuity of work and to great stability of employment.

"Solvay's staff consists of people who do not change, either in their work or in their habits of life. Without always realizing it, they appreciate and seek the security of tenure which gives them confidence in life and which suits their character. A vigorous house-wife, herself a living symbol of perfect stability, gave picturesque expression to her feeling when she assured us with great confidence that 'when one works at Solvay's, one's bread is baked'. And we did not have

the impression that she would permit her husband or her son, both employed at the company's factory, to taste any other bread.

"Most of the members of the staff own their own houses or are in the process of acquiring them; and the factory, as we have seen, encourages this settling down within a certain radius (10 kilometres).

"... All this means that, in the area, the workers at Solvay's enjoy real consideration. Traders and neighbours say of a worker 'he is at Solvay's' in the same tone as they would say 'he is with the government' when they speak of a civil servant. ..." (Belgium)

The colliery manager "interviews job applicants, weighing each one up to determine whether he will work well and fit in with his men"; family background and known friends are important factors. "A newcomer must be a strong man to go through the social initiation into mining in addition to getting used to the arduous physical conditions. Wastage amongst new recruits is high, and in effect, by a weeding out process, a form of closed shop (in the social sense), is maintained amongst the miners.

"... a new miner, even after 18 months of training and even after he has begun to work at the face (*the* job of mining), may still be referred to in the pit as 'the trainee'. Old miners will swear that no man can acquire a safe 'pit sense' in less than five years and doubt that such a sense can be acquired by one who doesn't begin his underground career before his twenties. Such examples reflect the strong sense of tradition and the age of the industry." (Britain)

"... In the not very distant past, the reputation of the large stores was quite deplorable. Although it was exaggerated, this opinion was based on some indisputable facts which were the inevitable consequences of the type of business and of the type of person employed. This is, generally speaking, no longer the case today, especially as regards our present example. In matters of loyalty, honesty and morality, the general management is inflexible, and every member of the staff knows that the slightest faltering is immediately and inescapably followed by dismissal. The firm demands of its principals not only an exemplary behaviour at work, but it also expects them to set an example in their private life; it believes that it is indispensable that nothing should be able to affect the prestige which they should enjoy in the eyes of their staff, as well as in the eyes of the outside world, within the framework of the 'standing' of which the firm is so justly proud.

"The Director-General told us: 'When I have to engage an employee, I never hesitate between a highly qualified technician and a man on whose spirit and character I can rely. One can teach the technique of a trade, one can remedy certain deficiencies in that respect, but one cannot avoid or prevent the evil which can result from the introduction of an element which is troublesome, because it cannot become integrated with the community'." (Switzerland)

Top Management

The Belgian and British organizations are parts of larger enterprises whose headquarters are elsewhere. The Scottish coalmine is one of about 1,000 mines nationalized in 1947, with three or four levels of management, each responsible for a number of pits grouped on a geographical basis, between the colliery and the London headquarters. Both the manager of the Belgian chemical works under study and the Scottish colliery manager are responsible to a high degree for the affairs of their units, and the latter's responsibility is emphasized by obligations connected with safety which are placed on him by law. The Swiss retail store is headed by a director-general who is completely responsible for its operations.

The Swiss director and, even more, the colliery manager have come up "through the mill". The director-general, an engineer by profession, acquired his business experience in the store and was only 25 years of age when he was entrusted with his present position. The colliery manager started as a working miner—but elsewhere—and the relationship between manager and men is decisively influenced by the similarity of their backgrounds. Both manager and men have learnt, lived and breathed mining all their lives, and little else. Even at social functions their chief topic of conversation is mining.

"Coming up the hard way has brought with it the impression that a man cannot become a manager satisfactorily in the place of his birth, because people knew him there as a boy with all his failings and because he is on too personal a footing with people who are afterwards to be under him. The other side of this card seems to be that the manager from outside is not completely accepted by the community, which adds an extra strain to what may be in any case a rather isolated position.

"The manager (and the agent) of Burncoal Colliery, like most Scottish colliery managers, was once a working miner and, beginning at the age of 14, slowly worked his way up, by working at a colliery all day and studying at night, to the position of manager. This very similarity of backgrounds may explain why managers emphasize their status at the same time as they, often very consciously, conform with the standards of the mining community.

"All this, however, should not be construed as meaning that the relationship between manager and men is strictly impersonal. It is surprising how many of his men the manager of Burncoal Colliery, for example, knows, and how well he knows them—in a colliery employing 1,400 men." (Britain)

In the colliery the manager is the king-pin of an organization which has no more than 65 officials to supervise 1,400 men on three shifts in the very difficult conditions of British mining. He is a tireless officer with a great variety of activities. The following extract from the study will convey some idea of this:

"He is like the captain of a ship in being ultimately and legally responsible for a large distinct unit which is constantly dependent on nature, and in his being always subject to call in emergency. As with the captain, his work is not limited to eight hours a day; many managers regularly return to the colliery for an hour in the evening to see how things are going—after having worked from 6.30 or 7 in the morning till 5 in the afternoon. He is like the captain in keeping in intimate touch with all the varied aspects of his unit: if he is not actual cook and bottle-washer, he knows the cook's job forwards and backwards.

"He interviews job applicants, sizing each one up to determine whether he will work well and fit in with his men; hurries the men down the pit if they dawdle on the surface at 6.30 in the morning; takes charge in underground crises and supervises emergency repairs; forever keeps an eye out in his wanderings for mistakes, slackness, danger-signs, men off their jobs, development prospects; checks on the checking of his functional specialists; deals with the union delegate over rate and other grievances; negotiates new wage contracts for new coal faces or altered conditions; chairmans the joint consultative and other committees; spends most of a morning going through the wage books with a fine tooth comb (this provides him with many clues to wasted skills and unnecessary costs underground and demands a detailed knowledge, as does the rest of his job, of the vast and complex underground workings, of the surface arrangements and of several hundred men). A detonator is missing; he must institute a thorough

search, lest it turn up in some householder's coal and explode. An assistant bath attendant is not needed full time; he is found some other work for two days a week on the surface. Overtime work is necessary in one part of the pit; the manager spends some time trying to find the most suitable people to offer this work to.

"A boy comes in late in the morning: he has slept in, missed the day shift and wishes permission to make it up by working the back shift (2.30 p.m.). The manager must act carefully: he must beware of offending others. 'What's your name, lad?' he asks. 'Where do you live?' 'Who do you work for?' The manager sums up the case in his mind: it is a worthy boy; his father has been a good worker in the pit for years, and is liked and respected by his comrades: leniency in this case, he concludes, won't offend others or create any dangerous precedents. He sees, as he walks by, that the men in one part of the pit are getting careless about removing steel props before letting the roof fall; he makes some observations to one of the men over the situation. Five men are coming to work in his pit from the other side of the country and will require some time to get accepted by his men; shall he separate them or shall be keep them together? He gives the matter considerable thought. One manager would break them up, on the grounds that they might make trouble as a group and would not get acquainted with his men if they stayed together. Another manager would keep them together, on the grounds that they might make trouble if separated, and would be lonely without their mates.

"In some ways the manager of Burncoal Colliery is more of a key figure than the managing director or works director of a factory of comparable size. In a given day he may have contact with men from the level of picking boy up to area production manager or higher; he may deal with problems of all sizes and implications, planning new development work, problems involving sizeable capital outlays, ringing up the bus company to make sure the buses are laid on to pick up men for Saturday (alternate Saturdays are worked, and the men have a claim to their pay if the bus does not call for them on schedule).

"A single day's events may include early morning discussions in the officials' baths with his junior officials—at 7 a.m., so as to see the night shift officials going and the day shift officials coming; a tour around part of the surface facilities to sign various report books and see how things are going; a talk with the agent, perhaps over breakfast; a tour underground; back to his desk in time for the stream of men waiting to see him before they go underground on the backshift, or after they come up from the dayshift; this may include everything from dealing with an unruly boy, who has been making trouble, to receiving a deputation from the men. Interspersed all the time will be conferences with various officials whom he calls in or who come in about something; conferences with the agent, in person or by 'phone; miscellaneous 'phone calls, like the one to the bus company, etc. At available moments he may study his charts to consider development plans. At about 2 or 2.30 p.m. various area specialists and representatives of colliery equipment and machinery firms may drift in, and at 3 p.m. or so the under-managers and overmen come in to discuss the day's problems and results; at times in the afternoon his office may resemble a small railway station, with groups of two or three chatting in various parts of the room whilst waiting to speak with the manager. Usually at about 5 or 5.30 p.m. a break comes, so he leaves while he can, usually dealing with one or two officials between office and car.

"In addition, the manager of Burncoal Colliery must serve, usually as chairman, on several colliery committees—the joint consultative committee, the canteen committee, etc., and *ad hoc* committees—and he and the agent must perform many duties outside the colliery, e.g. calling on officials and men when they are sick or there is death in the family, acting as master of ceremonies at various social functions—even going to meetings of both political parties during an election campaign to show that he is willing to listen to both sides."

The highest officials of the Belgian works and the Swiss store have the help of a bigger and more complex administrative structure. Their

activities are more concentrated on devising policy and general directives, leaving detailed work to lower officials.

After careful consideration at the time of his appointment in 1928, the director-general of the Swiss store assumed the duties of central staff manager for the whole organization. Convinced of the extreme importance of the human factor in any undertaking, he has managed to combine these duties effectively by clarifying the firm's policy and then delegating the responsibility for carrying it out.

"No one has ever been reprimanded for a decision taken 'in good faith' even if such a decision went against the established rules. This freedom of action, within the framework of wisely considered general principles has given everyone the opportunity of giving his full measure. It explains how the head of such an important undertaking can find the time necessary to carry out the duties of staff manager. By delegating his authority to, and rendering responsible, those whom he trusts—within of course, clearly defined limits—the director-general is relieved of nearly all routine work, and can therefore devote every moment of his time to the maintenance of a general state of mind which is the very condition of the success of his efforts . . . his contacts with the staff are fairly limited. Seeming somewhat distant to those who do not know him, he is certainly shy, and he makes up for this shyness by great courage. He is liked, but in a curious, and at the same time, interesting way . . . the spirit which he has created during the last few years and which has spread throughout the whole undertaking, has taken the place of his personal contact."

The Lower Levels of Executive Management

The organizations are subdivided into departments, divisions or districts, each under the control of an official who is in most respects regarded as a "small boss". Thus the Swiss organization has 6 branch managers, 53 departmental managers and 59 heads of service departments. In the Belgian works there are divisional heads for groups of from 100 to 200 workers. The colliery manager has 11 overmen each immediately responsible to one of two under-managers for a "district".

The Belgian study describes the standing and activities of the divisional head as follows:

"The divisional head must get to know all his employees and must be informed about the principal circumstances of their lives. He is helped by his subordinates, engineers and foremen, as well as by the information supplied by the labour department. By taking an interest in everyone's fate, he endeavours to develop a feeling of trust on the part of his workers, which brings them to explain their troubles spontaneously. He participates in the engagement of staff and strives to make the new recruits familiar with the factory. When someone returns to work after an accident or a period of illness, the divisional head always calls the person concerned and has a conversation with him. This happens also on the occasion of any important family event. He himself pays the salaries of the engineers, employees and foremen under his orders. He also pays the salaries of his workers, when he has the necessary time. . . . It is he who, under the control of the director, applies any penalties (with the exception of dismissal); he also is in charge of bestowing the rewards and the distinctions granted by the undertaking.

"These frequent contacts must tend to bring the worker to inform his chief directly of his worries and preoccupations. . . .

"The divisional head transmits to the director, or to the department concerned, all questions which go beyond his scope; he sees to it personally that a swift solution is arrived at, and brings it himself to the knowledge of the person concerned.

"He is responsible for the safety, the hygiene and the cleanliness of his section. He presides over the divisional safety council."

The nature and physical difficulties of mining over distances measured in terms of miles, and the small number of supervisory staff, make the colliery manager peculiarly dependent on the quality of his officials and his relations with them. There exists among them a great interest in the work and a great sense of discipline and loyalty, which has some similarity to the traditions of the army.

"Even with his officials the manager's 'separateness', like a ship captain's, is noticeable. Though they spend a great deal of time together, there is still a careful awareness of this distinction—maintained by, amongst other things, the use of 'mister' in addressing the manager. Other social differences, too, maintain the distinction; for instance, different customs and ways of life, and different status in the community. But they are bound together by a great interest in the work. The typical manager or the typical official works long hours and odd hours, and he likes to talk about his work. He may complain, but he shows his loyalty to his job in many ways. Sitting in on the discussions which take place in the manager's office after the day shift is over and his officials have conferred with the officials for the next shift, bathed and come to the manager to discuss the day's problems, or listening to the talks that take place in the officials' baths, one is impressed by the manager's and his officials' devotion to their jobs. One can see also that these discussions 'combine business with pleasure': the atmosphere, particularly in the discussions in the baths, is relaxed and informal, and undoubtedly is looked forward to by all concerned—however sticky some of the problems and difficulties which are discussed.

"The chats are important in another way: they help to keep flexible and strong what must of necessity be flexible and strong relationships. Variations in conditions of work and the general physical nature of a pit, particularly its distance and remoteness, make it essential that officials be able to 'by-pass' one another without raising vexed problems of status and formality. . . . In pre-nationalization days at least, often a manager who had worked up good relationships with certain key officials would, when he transferred to another colliery, take with him a certain number of officials with whom he had developed strong working relationships.

" . . . The traditions of the industry in Scotland set certain patterns of interaction between manager and junior officials which might appear to some outsiders to be quite dictatorial, on the manager's part, and subservient on the junior officials part. The manager has no hesitation, for instance, in calling in an official and reprimanding him for such a slight deviation as letting a man off early. . . .

"Yet the manager's manner in such a situation is that of man to man, not man to servant . . . a healthy sense of independence prevails amongst junior officials. An under-manager who regularly returned to his colliery after supper observed, however, that 'if the manager told me I *had* to come back in the evenings, I'd kick up a row'. His statement pretty well epitomized the paradoxical nature of authority and control."

In all three organizations top management exercises some direct control over the dismissal of a worker. In the Swiss store the decision to dismiss a worker is left to departmental management, but requires the approval of the central staff department to be implemented. In the

Belgian and British organization the power rests normally with the manager.

Below the heads of departments, divisions or districts in the hierarchy of executive management, there are lower officials such as foremen, deputies, and principal saleswomen, who are in permanent and direct contact with what the Swiss study calls "shock personnel", i.e., the sales staff who serve the customers direct.

Technical Specialists

Although executive managers in all three organizations are highly qualified technically, they are assisted by full-time technical specialists. There are some problems of integrating technical specialists with the rest of the organization. Even at the colliery where technical specialists have been employed for many years, they are still not altogether accepted by officials and workers.

"The technical specialists have not the status that line officials have—in general, that is: of course there are exceptions. Technical people are not as a rule at the daily meetings of pit officials, although engineering and electrical methods are often brought up for attention. The miner also being accustomed to the line relationship, it is more likely that the under-manager (or, often, the manager) or an overman will give technical advice. The authoritative relationship is old; the advisory, relatively new."

(Britain)

At the Belgian works, experience of management is regarded as an essential part of the training of young engineers. They are therefore given responsibilities in the field of human relations as soon as they enter the works, which make it easier for them to build up satisfactory relations with other officials and with the workers, and provides the first evidence of their social qualities and their aptitude for exercising authority.

"The young engineer acts as the assistant of the chief divisional engineer for a certain time and in that capacity . . . he should be in a position to study men as well as things. The safety and the well-being of the staff should, in particular, be the object of his constant care. He must talk to the workers and make a point of knowing the position of each individual; his duty is to advise them, and to facilitate relations between them and the divisional head."

The manager of Burncoal Colliery uses two technical specialists in a capacity of which no hint is conveyed by their titles—safety officer and training officer: many of their activities are akin to those of personal assistants.

"These men have as their office a room connecting with the manager's office, and he has a buzzer by which to summon them. Many of their duties are in the nature of staff assistants to the manager; the safety officer in particular, a considerably younger man than the manager and a counterpoise to him in personality, acts as a close aide, accompanying the manager on his underground trips, etc."

In all three organizations some staff are wholly engaged on matters of personnel. But at least at top level, and sometimes at lower levels also, staff management and technical management are combined in the same person. The Scottish colliery manager has only one specialist, the training officer, to help him full-time on problems of staff, and he is a recent innovation—which means, as will be seen in the section on adaptation, that he is still in the process of finding his place in the colliery. Though the officials' duties are to a great extent laid down by law, the manager takes a very close interest in the way they are carried out. In some staff matters the training officer is the right hand of the manager; for instance he carries out a preliminary interview of applicants. We have already noted that the director-general of the Swiss retail store is also head of the staff department for the whole firm including its eight branches. In all but the largest branches the branch manager similarly attends also to duties which would elsewhere be performed by a staff manager. This is so although the creation of the staff department dates back some 20 years and although the department now employs 20 persons, including six training officers and a welfare officer.

The position in the Belgian factory is similar. The central staff department at headquarters is advisory only, working out general policies which are expected to be flexible in application at the various factories; its functions are primarily research and co-ordination. It has four sections: "a secretariat, in charge of the administration of the staff, of social research, and of documentation; a labour section, in charge of questions relating to work; a social welfare department, whose job is to study and to suggest measures to improve the lot of the staff outside their work; and a medical section, which operates in liaison with one or other of the three major sections, but more especially with the social welfare and labour sections".

These four sections are found also in the factory but they are not combined in a central department. Instead they are separately attached to various sections of executive management and co-ordinated by the factory manager.

"The labour department is under the authority of the chief engineer, who combines them with his technical duties concerned with production. As regards the staff, he is especially concerned with everything which relates to *men at work*.

"Everything relating to the worker as an *individual* (pensions, family allowances, insurance, etc.) is the administrative responsibility of the secretariat, whereas assistance to workers or their families comes within the province of the social welfare department or of the medical department.

"The scope of the chief engineer's activities comprises the following matters: (a) Qualifications and salary. (b) Adaptation (psychotechnical tests, medical examination at the preventive health centre, etc.). (c) Safety, hygiene, improvement of working premises, fire prevention. (d) Planning of work. (e) Training of executives. (f) Special technical research (concerning salaries, for instance).

"The labour department deals with recruiting, preliminary interviews, general examinations and psychotechnical tests. It submits the data collected to the heads of the various production departments who, in possession of the necessary information, can carry out tests concerned with professional qualifications, and are then in a position to decide with full knowledge of the case." (Belgium)

In the Swiss store, executive management is also associated with the recruitment and training of staff. Bearing in mind the requirements, the staff manager sifts the applicants on the basis of an elaborate questionnaire and an hour's interview in which he tries to get a "clear idea of the candidate's conceptions in matters concerning human relations, working with others, hierarchy, discipline, etc.". Some applicants are eliminated at this stage.

"The others are then called for a second interview, at which the candidate's future chief is usually present. The second interview is more particularly devoted to a discussion of technical and professional problems. From another point of view, it means that the responsible chief is enabled . . . to participate in the final choice. Having thus been asked to take part, the latter will not later be able simply to place the responsibility on a third person if the results secured are not those which had been hoped for.

"The methods of training are adapted as closely as possible to actual conditions in a department or in a group of selected departments. They are based on close co-operation between the departmental head and the monitor in charge of training. Arrangements are made for the monitors to be systematically informed of anything which may be directly or indirectly concerned with the firm's policy and with the techniques applied."

The Swiss study goes on to stress the importance of small personal gestures of friendliness on the part of management.

". . . constant attention is devoted to small gestures which can be carried out throughout the year, and which provide the employee with proof of the interest which is taken in him as an individual. Thus the management congratulates employees on their birthday, sends a personal letter to members of the staff who are sick, or provides them with some little luxury, etc. We have seen to what extent such small tokens of friendliness impress employees, more so even than important measures of staff welfare."

The Workers' Responsibility

All three organizations emphasize the responsibility of the individual worker. Hence the great stress on the importance of careful selection and training. Individual attention continues subsequently and is reflected in methods of payment, promotion, and many matters of general day-to-day management.

The Belgian and Swiss organizations operate job evaluation and merit rating schemes. The Belgian scheme determines the remuneration of each worker according to:

"(a) Professional knowledge: number of years of study or practical work, time necessary for adaptation.
"(b) Skill, dexterity, precision: degree of precision demanded, co-ordination of movements shown by the workers.
"(c) Other requirements of the job: effort, skills to be developed, posture at work, moral and mental qualities, appearance, education, initiative, team spirit, attention to instructions, monotony, etc.
"(d) Responsibility: consequences of a mistake (cost in material, equipment, loss of time), vigilance in the matter of safety.
"(e) Influence of surroundings: temperature, dampness, fumes, risks."

In the Swiss store, a merit rating scheme is applied not only to the personnel but also to other staff attached to service departments, and other methods are being worked out to assess the proper remuneration of executives and principals.

"Briefly, the system consists of the allocation of a certain number of marks up to a maximum which is fixed for each of the qualities necessary for the efficient accomplishment of a specific task. The marks are awarded simultaneously by three persons: the employee's immediate superior (representing the particular working team), the staff manager (representing the firm) and the monitor in charge of training (representing the customer). All three estimates are compared and any differences discussed, until the principals in question reach an agreement over the final allocation of marks. If the number of marks awarded exceeds the average, an increase in the basic salary of the employee concerned is recommended. . . . If the number of marks awarded is too low, this enables the staff manager to realize the employee's weakness, and to assist him in perfecting his knowledge or in overcoming the obstacles which prevent him from showing proper results."

These schemes help also in assessing the qualifications of workers for promotion.

"Apart from the specialists with a well-defined job, such as the machine-tool operators, the boiler men and fitters of the maintenance shops, the majority of the staff recruited consists of unskilled workers. . . . Those who show themselves to be good workers from the point of view of judgment and stability, are sometimes appointed to replace workers on production, and may later be given tasks where they have to carry out well-defined duties: manipulate valves or taps in certain closely specified circumstances, watch the levels of pressure gauges and clocks, etc. This turns them into production workers who, in the chemical industry, are skilled workers. The duties are usually very simple, but they demand a high degree of attention and a sense of responsibility." (Belgium)

In the Belgian works even compensation for accidents varies according to the degree of the worker's responsibility for an accident.

"Thus the worker who is entirely responsible for the accident receives only the compensation laid down by law, whereas the worker who has suffered an accident through no fault of his own, receives, during the period of temporary total disability, an allowance equal to 100 per cent of the salary which he has lost. When responsibility is shared, he receives two-thirds."

In the Scottish colliery these matters are not formalized to such an extent, but the responsibility of the individual worker and the small team of workers is at least as great.

"One of the strongest traditions of miners is their tradition of resiliency and adaptability. Miners may be moved about between sections, to start a new section, to team up with somebody on another shift, to take the place of an absentee, to help until a certain difficulty has been overcome. Miners have always emphasized, and admired men for qualities of toughness and manliness. . . . When a breakdown occurs anywhere near him, the miner automatically gives a hand, and in the course of his normal work he does small tasks of repair and prevention. . . . If he is paid by results his earnings are liable to fluctuation, in accordance with the bargain that he manages to strike, or his predecessors have managed to strike, with management; or in accordance with the extent to which breakdowns hold up output, with the concessions made for special conditions, with the amount of overtime he works. Although in setting a day's 'task' allowance is made for interruptions, some interruptions and delays cannot be made good during the shift, and it is not unusual for miners to work overtime without notice in order to complete the day's job. . . . Special jobs, both below and above ground, which require individuals to be left very much on their own and which are difficult to supervise, are given to people with good records. . . . Teamwork is the essence of mining. The miner, an individualist, prefers to work in small teams. There is a considerable amount of supervision of one another by members of working groups. Teams of three or four men are frequently to be encountered who have worked together for years, on brushing, repair work, etc. Certain men get to be known as the best teamworkers, and it is they who are appointed leading men of small squads on special jobs. Similarly the training officer finds that certain men make the best training supervisors, and he tries to team up recruits with these men."

The physical conditions of mining support traditions which emphasize the man to man relationship of manager and miner. Individual judgment counts for a great deal in all aspects of mining. The best methods of performing certain crucial operations are still subjects of disagreement amongst experts; therefore hard and fast rules cannot always be laid down, and the miner's detailed knowledge of a particular working place is often the determining factor in an important technical decision. With so few officials to supervise groups of men distributed over large, disjointed areas, much responsibility again falls naturally on the miners. They have several established means of communicating direct with the manager—through personal contact below and above ground, through the union representatives, through deputations, through social contact in the village and in miscellaneous activities which often produce situations where matters of work can be satisfactorily discussed. Through attaching great importance to knowing his men well the manager can deal considerately with the affairs of individual men.

"The instance, some pages back, of the boy who had slept in and wanted to work on the back shift was a case in point: the manager gave the greatest care and thought to the boy's standing in the community and consequent ramifications of his decision, before deciding whether to let him work on the back shift after missing the day shift."

The organization of the Belgian works has included a variety of joint management: worker committees which had been in existence for many years before the establishment of works councils and safety committees was made compulsory by law and before the workers' association

became a trade union in 1947. For instance, there were a safety council and three divisional safety committees; the divisional committees have been re-organized to meet the requirements of the law, and the safety council has been retained, though not legally required. In addition, there are committees composed wholly of workers and employees to administer pension and mutual assistance funds and the affairs of the social club, to all of which the firm contributes substantially.

The joint consultative committee at Burncoal Colliery is only a few years old, being set up as required by the Act under which British collieries were nationalized in 1945. Its integration in the organization of the trade union is even more recent. Though its values are therefore still being explored, some are already evident.

"Certainly, one function the committee does have very clearly, viz., as an additional opportunity for explaining management decisions, and for the men to explain their decisions. Thus, for instance, management may decide that a good block of coal, now being worked only partially, might better be saved until such time as men and equipment would be available to extract it more intensively and with greater efficiency. Men very strongly dislike leaving a good face, and it might not be at all clear to the men involved, in this instance, why they were being moved. The opportunity for explanation provided by the joint consultative meetings is an important addition to the other means of communicating the reasons for such a decision."

In the Swiss store there is no organized representation of the staff within the firm apart from the trade union committee established in one of the branches.

"The director-general has often pondered the question of whether or not it was necessary to create such a body, and he has had the question investigated by his immediate assistants. Until now, he has always decided against the creation of a committee, as he has failed to see what additional advantages it would procure for his staff, and has wished to avoid at any cost the creation of an organization which would have no real substance or meaning."

Welfare and Participation in the Community

The Belgian and Swiss organizations, situated in densely populated areas and drawing their workers from many dispersed points, participate in the lives of their workers outside working hours to the extent of providing welfare and recreational facilities for them and their families, and sometimes for the community in general. The activities of the Belgian factory in this direction are focused on the staff association.

"In 1936, the company erected a truly remarkable building near the factory, which was to centralize all the social activities arranged for the staff. It includes a large hall where stage or cinema shows can be given; a restaurant with a bar; a swimming pool equipped in such a manner as to make it the finest in the Charleroi area; a gym hall; a library; and a sewing room where courses in housewifery, etc. are given. In addition, there is a sports section which includes a bowling club, a football club affiliated to the Inter-corporative Association, and a swimming club.

"This building and the activities centred there are managed by an association created at the instigation of the management, and called the 'Staff Association of the Solvay Factories'. This is the staff's club. All members of the staff, workers and employees of all grades, belong to this association, which is also open to their families. The company helps to provide adequate funds. Members of the staff form the committee, and the management of the whole affair is entirely in their hands."

The welfare facilities in the Swiss firm include a free library, a sports club, and a holiday centre where the staff can spend week-ends and holidays.

Although some of the facilities are well used, this type of social measure has in many ways not met with the success hoped for it. Probably of greater significance have been the welfare services extended to individual workers and their families. They include pensions, sickness benefits, and help with housing. All these discriminate in favour of the worker with long-service and probably play their part in attaching workers permanently to the firms. The help extended by the Belgian firm to workers wishing to become house-owners has the interesting condition, in addition to five years' service with the firm, that the house to be bought is within 10 kilometres of the factory.

"In this way the company seeks to support the stability of its staff, the help thus given becoming a real favour for members who remain attached to the factory."

The Belgian study mentions welfare policies to encourage personal initiative and to avoid substituting the firm's efforts for those of its employees. For instance,

"As a general rule, the feeling is that the interventions of the social welfare department should avoid taking the form of granting, in particular cases, allowances in money or in kind, which may be looked upon, by the beneficiaries, as charity from the 'boss'. . . . With adequate salaries, the social welfare institutions should enable the worker to avoid real difficulties. If cases of hardship are unavoidable, it is better to have recourse to the mutual assistance fund managed and financed, at least in part, by the members of the staff."

At Burncoal Colliery fewer welfare facilities are concentrated on the work-place, but there is closer participation by colliery management in the social life of the mining community.

"Traditionally, managers and agents have looked upon their participation and leadership in community affairs as of first importance. The manager of Burncoal Colliery takes part in village concerts—usually as chairman—attends the various competitions—swimming, bagpipes, etc.—for which the district has some fame; maintains regular contact with the school master; is an elder of the church, and friend and supporter of the parson; attends political meetings; is a heavy contributor to, and a leader of, local charities; bowls at the local club.

"All these contacts are particularly important not only because they reflect his interest in the community life of his employees and his sense of responsibility, but also for another reasons the reserve between manager and miner at the colliery is such that there must be these other contacts away from the colliery in order to make for a balanced relationship. The wisdom of tradition has contrived community responsibilities for the manager and agent which bind pit and community, men and manager."

Adaptation

The organizations have grown and adapted themselves to many technical and social changes. The Belgian chemical works started off with so advantageous a technical process that it quickly revolutionized the soda industry, and set up factories in France, Spain, Italy, and branches and associated companies in a number of other countries. By 1950 it was part of an important international network with varied and powerful interests. By an active policy of research and improvement it has kept in the forefront of its trade.

The Swiss store has eight branches in different parts of the country. It has applied management techniques developed in other countries, particularly in the United States. Among these are many concerned with ensuring good human relations. Methods of selection, for instance, have been elaborated into a comprehensive programme which in the case of principals includes, besides interviews, a questionnaire and, in keeping with local attitudes, use of graphology and occasionally of astrology. A research department has been developed which works with the International Association of Large Stores. The study concludes that it is a "prosperous undertaking which has carried rationalization as far as its size and its means permitted, without causing harm to its staff". The Scottish colliery has also assimilated new technical and administrative methods.

But the process of adaptation has not always been smoothly continuous and there have been times in each organization when important policies have had to be reversed or when actions sometimes involving great outlays of resources have had admittedly unsatisfactory results.

"After an acute regression from 1914 to 1919, the increase in (sales) turnover started again, but there was a notable decrease in the net profit earned. The contradiction between these two factors . . . revealed a defective organization, unable to secure the really economic management of the business.

"This fact did not escape the management which, in 1928, took a series of drastic measures. Far-reaching reforms were made in the composition of the general management. From including several members, it was placed in the hands of one man. He is the man who today controls the firm's destiny, and under whose authority it has developed along normal lines, profits increasing side by side with the turnover. . . . Whereas during the first years of the re-organization, the tendency was towards complete centralization, the trend which has developed since is more subtle, and aims at combining technical centralization with decentralization in the matter of human relations." (Switzerland)

"When the social centre was erected, the staff, and in particular the factory workers, showed some distrust, as they thought that the company had some ulterior motive in placing these magnificent premises at the disposal of the personnel, and they suspected it of attempting to fetter them even in their leisure. Yet the creation of a centre of this kind in a place like Couillet could be considered as a necessity, for there was absolutely nothing which could provide the workers with suitable means of entertainment in an adequate setting. Despite this, with the exception of the four or five events (ball, theatre show, etc.) which the staff association gives every year, the employees do not use the centre. . . .

"Sports have not met with much success, except perhaps swimming. The fact of having a swimming pool which one cannot find elsewhere is a favourable element, and the swimming lessons given every Thursday to the children of the staff for several years past mean that the swimming club has gradually been reinforced by younger elements, who have not the same prejudices as their elders, and in whom the love of sports takes precedence over other considerations. A dramatic association has also been set up, but seems to be on the decline.

"On the whole, it is observed that the swimming pool and the other premises are largely frequented by persons who do not belong to the factory, whereas the staff prefers to seek its entertainment elsewhere. A pointer to the position is the fact that the theatre hall is now let several days a week to a cinema concern.

"It should be observed that in other factories belonging to the company, similar measures have been taken on a lesser scale, and have met with considerable success . . . this usually occurs when the factory is far removed from any centre capable of providing such recreation." (Belgium)

Burncoal Colliery was in such a period of great pressure and difficulties of adaptation when the study was carried out, and we may here extract some paragraphs which characterize this sort of situation. The general background was that substantial social and technical changes had taken place in British collieries and mining communities over a period of several decades without being satisfactorily assimilated. Many collieries had got behind, as it were, in their adaptation to changing social conditions, while these changes were increasing in tempo and in degree. The result was a great complex problem of adaptation.

Technical change: "Mechanization, though seldom encountering active resistance, was not generally received by the men with enthusiasm, no doubt in the fear that more machines meant fewer men at a time when unemployment was widespread; and, where machinery was installed, its potential savings seem largely to have been dissipated by a quiet but effective determination that the number of men discharged should be kept as low as possible. This must have been a contributory cause of the overstaffing in many of the operations at or about the coalface. . . . It is often very difficult to follow technical history while it is in the making and this is perhaps *especially* true of machine mining. Before the system of Longwall *mining* with face conveyors became common, coal had been gotten by small self-reliant teams of men, able and accustomed to perform all the operations required in their working places for keeping themselves secure and for getting the coal. With the introduction of machine mining larger teams were a necessary corollary. Where payment remained on a piecework basis, the wage was often pooled over these larger groups of men, so that the personal efforts of the individual made less and less difference to the total earnings of the pool. . . . It gradually came home to the miner that, though he was spared on these faces the severe physical toil of hand getting, he was still involved in considerable effort with little scope for the exercise of the skill he had acquired through the old system.

"Although the adverse effect of this change in the individual status of the miner was, and largely has been, confined to the coalgetter, it is he who has always been recognized as representing the miner's calling. Any lowering of his status, therefore, tends to react unfavourably on the workers throughout the mine. Unfortunately it was not appreciated that machine mining was resulting in an impairment of his status, and that the effect of this upon his outlook and behaviour would be likely to reduce the advantages in productivity expected from the change of method." (Quoted from Report of the Technical Advisory Committee on Coal Mining, 1944—commonly known as the Reid Report.)

New jobs and new methods: "In the complexities and inaccessibilities of pit-work, each introduction of a new kind of specialization raises complicated problems not only of physical division of labour but also of status and communication . . . a specialist has no direct authority; he is not supposed to interfere with production. Yet it is felt that if he is to be adequate he must be experienced in production and must, indeed, have been accepted as a real fellow-member by mining men. With such a background, a background in which the traditional relationships are authoritative, not advisory, the new training officer must suddenly reorientate this approach based on years of habit and experience. And in addition, he must stand up to the insecurities of his status and cope with undue resistance or indifference on the part of line officials and employees. . . .

"The specialists are occasionally apprehensive of their functions being infringed by line officials. Partly as a result of this, production officials have reacted by being unwilling to take responsibility for as great a width of operations as they used to; this is also because they see the specialists 'around' and feel they might as well 'give those people some work to do'. A certain amount of uncertainty and 'buck-passing' results from this; and it even becomes necessary at times for the manager to tell a specialist to get after the production people to get a job done—a reversal of the situation of line officials getting after the specialists.

"New managerial methods imposed from above are very liable to clash with accepted relationships. Thus it is natural that the introduction of formal joint consultation in collieries (required by the law under which the National Coal Board was set up) would lead to some expressions of scorn and to some real difficulties. It is felt by some, for instance, that joint consultation will not produce workable suggestions for increasing efficiency because 'the men have always assumed that management thought of every possible way of raising profits'."

The study recapitulates, as follows, the traditional bases of team work among miners and notes how they have atrophied or have been destroyed:

"The traditional unity of pit and community has been undermined. This relationship used to be close-knit and comparatively undisturbed by the presence of outsiders. Now there are workers from the continent and from Ireland, Bevin Boys, new recruits from other industries . . . miners are drawn daily from other districts by bus; an increasing number of miners are being transferred to other parts of the country as a result of closing uneconomic pits; and all this is in addition to the general trend away from the isolation of individual communities. This aspect is especially important at Burncoal Colliery, which lies in a particularly individualistic community, slow to assimilate outsiders.

"Then there were the specific community activities—local government, charity, etc.—which were focal points of responsible participation and teamwork. These are being displaced very considerably by the removal of many of the functions and responsibilities in such affairs to higher levels of government and paid civil servants.

"There were union affairs. Nationalization of the mines, national collective bargaining, the wage-freeze, etc. have substantially reduced the functions of the local branch of the union. Thus the local branch union is stripped of many important official functions which could be focal points for responsible and satisfying co-operative endeavour.

"There was the community leadership provided by executives who have since been shifted to other communities as a result of the nationalization and re-organization of the industry. Few quantitative data are available on this point, but observation of the moves plus a knowledge of the importance of the industry's executives in community affairs makes the suggestion very forcible. It stands to reason that if the best leaders are chosen for central posts, their communities will feel the loss.

"There was the contracting system. This was subject to serious abuse, so serious that it was discontinued. But the essence of the system, as already noted, was teamwork, with the aims, scopes and members of each team very clearly specified and differentiated.

"There was the method of work in general. Teamwork pervaded it—the teaming of son with father, of cousin with cousin, teaming up to do jobs which were clearly distinct from other jobs, and which were done from beginning to end by the one team. Now there are long longwall faces involving scores of men; work is done in three cycles, each cycle by a different lot of men; specialization by *function*, both required by the new techniques and encouraged and enforced by union practices, replaces specialization by *association*. A man's pay depends no longer on the efforts of his small team, but on a team of as many as 50 or more—on the whole pit for that matter, for a stoppage in one place may hold up the entire colliery. Mechanization, in some senses, displaces or reduces the importance of men, restricts the opportunities for team work and modifies its results.

"All these factors have limited and impaired the miners' opportunities for spontaneous constructive co-operation. Yet their habits of teamwork are strong and deep-seated, their habits of mutual assistance are as strong as their individualism, and they will unite at the slightest danger. Deprived of traditional opportunities for team work, they will team up in resistance—to outsiders, to innovations, to mechanization—or in hostility, in the form of strikes, for instance. The kind of response will depend on the skill of management in sensing and utilizing their need for responsible daily participation in small stable groups."

The results are that custom itself has become inflexible, that management's job has become much more difficult and that the coal industry may be said to be living on wasting capital, particularly on the capital represented by the officials' traditional loyalty and devotion to mining.

"Where change has clearly conflicted with custom, custom has often won. As the Reid Report pointed out: 'The miner preferred to preserve his traditional methods of work and the customs with which he had grown up, unsuitable though they sometimes were, to the changing circumstances of the time'. All these changes —some big, some little, all adding up to something quite substantial—have, among other things, made more difficult the managers' and officials' job of knowing individual miners and their personal backgrounds. . . . The manager has about as much knowledge of his men now, perhaps more than before. But much more knowledge is needed now to understand them; the manager of old could take more for granted. Similarly, the manager is just as attentive to 'human relations' now, in fact probably much more attentive than in times past. But the situations he must deal with are considerably more complicated and varying, and coloured by factors outside and beyond the local community. Moreover, it is a greater struggle to keep abreast of the men's personal situations today because there is so much else to do—more machines and regulations for the manager to deal with, workings more difficult and remote—and because the turnover of the men is somewhat greater. . . . Some manifestations of this circumstance are quite obvious. Some management personnel work at full capacity as a matter of routine; some are away from home so much as to have an adverse effect on their family life. Until very recently the colliery official ate, slept and breathed mining; many still do. But it is unlikely that these habits will persist as officials and their wives become better acquainted with the ways of life of other people in the national community and their interests widen. In this sense the mining industry is living on its capital, in the same way that in the past century its treatment of the miner could be regarded as a form of living on capital."

2. COMMUNITY FOSTERED

The groups into which the 12 European studies have been divided illustrate different aspects of the problem of community and merit a close comparative study. Such a study can be usefully made only if the information available on the various cases is set out according to a consistent method of exposition. Accordingly, in the ensuing section, dealing with five organizations which fostered community, the method of presenting the data is the same as in the study of organizations which maintained community. In order to facilitate a comparison, not only of the main groups but of individual organizations, the matter in both parts of the chapter is arranged in the same order and deals in turn with: social environment of the organizations: top management; lower levels of executive management; technical specialists; personnel function; workers' responsibility; welfare services; participation in community affairs; adaptation to changing needs.

1	2	3	4	5	6	7
Country	*Type of work*	*Age of organization*	*Size of organization*	*Nature of community*	*Trade Union membership*	*Strength of administrative structure*
		years	*Numbers employed*	*Numbers of population*	*% of 4*	*% of 4*
France	Electrical equipment manuf.	26	950	Suburb	70 [1]	36
Great Britain	Hosiery manuf.	140	3,100	Town		
Italy	Artificial fibres manuf.		520 [2]	Suburb	45 [3]	15 [2]
Sweden	(a) Mechanical engineering	59	2,145	Town/ suburb	98	25
	(b) Cotton textile manuf.	90	1,285	Town	95	15

[1] Four out of five workers have left the CGT (Confédération Générale de Travail) to form an autonomous union.
[2] These figures are temporary. When rebuilt, the factory will employ between 1,500 and 1,600 people.
[3] One-third of this figure belong to the Communist trade union.

Towns and Suburbs

The five organizations in this group of studies are all situated in large towns or in suburbs of large towns. Therefore this general distinction has been substituted for that of size, in the table.

The dispersal of the workers is most striking in the case of the Italian factory. Of the 520 people employed there, 150 (including most of the staff) live in the large town, 200 in the outskirts and the rest in no fewer than 45 country villages nearby. These three areas have distinct major characteristics in addition to many smaller internal differences. In the town much progress has been made in the provision of cultural and recreational facilities. The people are conscious of this,

tend to disdain the simpler country life and to claim a higher standard of living for themselves, and are very individualistic. The outskirts have little social cohesion. They are peopled mainly by a class of workers who "tend to assimilate most of the defects and very few of the merits" of the town's inhabitants; they are characteristically proletarian but tend to vote for the social democratic parties. The small towns of the provinces are predominantly agricultural. Their inhabitants tend to be small property owners, artisans or craftsmen; and although they have easy contact with the town, they live more simply and unpretentiously, are more thrifty by nature, and are much less influenced by the communists. The whole area is notoriously poverty stricken. But the workers living in the country are not as strongly bent on securing higher wages as their urban mates because they are less exacting in matters of comfort, pay even less for food and housing, and have greater opportunities to supplement their earnings.

There was much coming and going in this area, as in the towns in which the other firms studied were located.

". . . worldly materialism . . . the moral neo-paganism propagated by all means during the fascist period . . . the war, the famine that followed and the foreign military occupation between 1943 and 1946, large numbers of soldiers belonging to many nations, races, and religions passing through the area have substantially lowered the moral tone . . . and weakened the family-structure.

"Easy gains during the early period of the occupation followed by fearful unemployment have multiplied economic needs. The blasting of many thousands of homes combined with the indiscriminate requisition of many others for military use have driven many families to live 5 to 10 persons together . . . it is easily understood how a Communist workman, who takes part in a demonstration for the engagement of unemployed workers for jobs now filled by wives and sons of employed workers, goes afterwards to the factory management to try to get his own son engaged." (Italy)

". . . since 1936 the population has increased. During the last seven years more than 1,000 persons have moved into the town each year. . . . About one-third of the workers were born in the town and its vicinity. A relatively large number are recruited from one of the naval bases in southern Sweden."

(Swedish engineering company)

Even with this flux the organizations have managed to recruit a certain number of workers through the channels of human association outside the works, and they manage to retain some for long periods.

"I lived near the mill and took a job here because that was what the girls in the neighbourhood did." (Quoted in study of Swedish cotton mill)

". . . if someone is employed by that company, he has the feeling that he can well earn his living there for the rest of his life."

(Quoted in study of Swedish engineering works)

But generally the flux outside the works is reflected in a high rate of labour turnover and other movement in the organizations, and in the fact that there is little sustained contact between the works and local institutions. The British study deals briefly with the separation between the lives of workers during working hours and their lives at other times in a Midlands town:

"For centuries the hosiery industry had been concentrated in certain districts of the Midlands. Its rise to prosperity came late: even in 1870 the great majority of hosiery workers still worked in their own homes or in small workshops. Another generation passed before most of them worked in factories. Many of the towns including the one in which the firm here under study is situated, are therefore relatively clean and modern.

"It is probable that the improvement in material working conditions involved a loss of social atmosphere. Traditionally, the work had been done at home, the men knitting the hose and the women finishing it off. Family and working life had been well integrated. This pattern was destroyed when the menfolk were brought into the factories to look after the technically improved knitting machines. At first the knitted hose was taken out to be finished by the women at home. When the women themselves were also drawn into the factory, they joined as individuals not as members of families: so that what had looked like a reunion was in fact invalid, since the main social grouping was ignored.

"It was not because women as well as men worked in the hosiery industry that factory life was inadequate: much of the work was woman's work by long tradition and this persisted, particularly as the work was relatively restful. As in other industries, the inadequacy lay in the disintegration of the workers' lives into life inside and life outside the factory.

"The results of this break-up of the social pattern could be seen in a number of directions. People in the community described themselves as 'dull and unfriendly'. Their circles of friends and acquaintances tended to be very limited. For recreation they drifted to the cinema, which is even less of a social event then other forms of passive amusement. In short, they appeared to live in a social vacuum, in a state of what Durkheim has called *anomie*, which was, and still is, typical of British suburban life—not that there were no social clubs of any sort, but the social forces generally favoured isolation."

Besides the general flux and the sharp division between the affairs inside and outside the works, some studies noted that the localities in which the organizations were situated seemed to lack the machinery for any substantial community life and that, in the words of the French study, "in the matter of politics the population . . . most frequently holds what are commonly described as advanced opinions".

"In the particular area in which the company is located and from which about 50 per cent of its employees are recruited, the Labour Party won 50 per cent of the votes in the last election and the Communists 25 per cent. This area lies on the outskirts and consists only of workshops and dwelling houses. There are no restaurants and very few shops and cinemas. It has a decidedly industrial character." (Swedish cotton mill)

"The centre of the town is typical of any small Swedish town. Industries and residential areas are located in the outskirts. Though heavily industrialized, the town does not give the impression of an industrial centre. It is to a remarkable degree lacking in administrative institutions. . . . The town is in many respects affected by its nearness to Stockholm. . . .

"The company was earlier located at some distance from the town, but the development of factories and residential areas has brought the town right up to the boundaries of the company's premises." (Swedish engineering works)

Top Management

Members of the families who established the firms were to be found in all five organizations some of which were predominantly "family

firms". Thus there was an important element of continuity which, in most of the organizations, found expression in the general policy of the undertaking and in the men whom the director selected to manage the business. In the Swedish cotton mill, for instance, the position was as follows:

"... two local families ... still have an important interest in the company. An elderly member of the second generation of one of the families resigned his position as managing director of the firm 15 years ago. He is today chairman of the board. A member of the third generation of the other family is also a member of the board. The present managing director does not belong to the original owning families ... is now in his sixties, joined the company in 1929 and was appointed managing director in 1935. During his time as chief executive the firm has acquired a better plan of organization ... this transitional organization with its relatively high degree of centralization must be retained for some time until the company is stabilized, and until the question of a successor to the present managing director has been solved."

Where the family played a leading part in the management of the organization, continuity clearly affected directly the manner in which the affairs of the enterprise were conducted, and the structure of management. This was the case in the British organization.

"Throughout its history members of the owning family had worked their way up through the firm and in due course become working directors—the only form of directorship—carrying on increasingly well-established policies and procedures. Because of the family's active participation the succession of directors was never in doubt and their position was secure. Members of the board felt free to suggest any changes, however radical, without any doubt arising as to their right to do so, their long-term interest in the firm, or their competence to judge after long years of intimate acquaintance with the organization. ...

"Three factors in particular seem to have made it possible for the firm to grow greatly in size and complexity without sacrificing great flexibility. First, the directors' experience of working with one another, and their long first-hand acquaintance with the firm's people, products and processes, have conduced to the growth of an effective higher management team who share their activities more generally than is indicated by the functional titles of the individual members. Secondly, by delegating many day-to-day functions and generally carrying on the tradition of departmental autonomy, they are free to spend a considerable proportion of their time on the factory floor, visiting different parts of the works according to their own inclinations or responding to calls for special assistance. They rely, largely, on personal contact to retain their 'feel' of the situation in the factory.

"Thirdly, the directors tend to draw new permanent forms of organization as well as future policy out of the problems as they arise and as the forms suggest themselves. There have been no large-scale schemes of re-organization, and the process of developing the organization step by step is expected to continue."

(Britain)

In all five organizations a level of senior management, variously called assistant or senior managers or superintendents, performed many of the day-to-day functions of more than departmental relevance. Many of the officials who filled these posts were young, exercised general supervision over a number of departments, maintained personal

contact with affairs in the departments and concerned themselves with effecting improvements.

"Altogether the number of departmental managers has increased to 50, of whom 20 manage production departments. All have continued to be formally directly responsible to the directors, but by 1950, three senior managers exercised general supervision over the three major groups of products of the firm, acted as a link between the managers of production departments and the directors, dealt with matters affecting all the departments in the group but no others . . . and carried out some functions for each, such as costing." (Britain)

"The managing director . . . has delegated most of the daily executive work to two assistant managers . . . both young men with good university training." (Swedish cotton mill)

"The managing director . . . is a young man, a little more than 40, with a university degree in engineering. He joined the company in 1939 as assistant manager, and in 1940 he was appointed managing director. Under his leadership the company has not only expanded but has been completely re-organized. . . . Most of the executives are young people who have had great opportunities for developing their own personal skills. Promotions have been frequent.

"Compared with the textile company there are more levels in the management hierarchy in this firm, and the organizational structure is to a larger degree built on informal committee work. It is not clear in all cases to which executives certain department heads report. The manufacturing departments are divided up into four groups each under the leadership of a superintendent . . . it is only the superintendents who have the right to dismiss a worker, though there are cases when the department heads claim that they also have this right. . . . Hourly wages are decided upon by the superintendents. . . . " (Swedish engineering company)

"A manager is responsible for running his branch (one of several in a concern with head offices in Rome). The present manager, a mechanical engineer, was for four years in charge of the technical department before his promotion in 1935. He has an assistant manager, who is a chemical engineer and is especially concerned with the manufacturing processes . . . punishment can be inflicted only by the manager. . . . The workers trust him because they see him always among themselves exercising personal control and taking an interest in everything and everybody with an ability and experience acquired over many years of management. Some regret the coldness of his natural disposition and his severe manner; but even this is considered by the same people as a guarantee of impartiality of judgment and of treatment." (Italy)

Departmental Management and Supervision

The firms studied were divided up into departments or divisions, each headed by a manager. These departments had a large measure of autonomy, which was reflected in variations in practice and organization as between departments in the same firms, e.g. in the British hosiery factory.

"The firm was divided into 12 largely autonomous production departments each covering most activities connected with the production and sales of a certain type of article, such as fully fashioned stockings, children's socks, or knitted dresses. These were clearly designated as the hub of the organization. Each production department was under the charge of a manager who was responsible for its affairs; the activities of service departments, such as machine maintenance, were charged against him. . . . He had little contact with other production departments. Before the war . . . the firm resembled a collection of 12 independent

units drawing some common services from a central organization. This feature, apart from bringing forward as managers men of all-round experience and independent judgment, gave considerable flexibility to the organization. Different departments were already characterized by different arrangements in numerous matters, and in due course changes could be introduced and observed in all the complexity of real situations in a limited area of the firm.

"About 90 per cent of the departmental managers had worked their way up through the firm, mostly by doing handwork from the time of leaving school till the age of 18, then moving on to foreman's help, foreman and finally manager. Traditionally they stayed with the firm for many years, often for a life-time. In a high degree, therefore, the same considerations applied to them as to the directors: unquestioned loyalty to the firm and extensive knowledge through long acquaintance with the firm's personalities and processes. . . . As a matter of policy the directors have kept the formal organization very flexible so that they could, as the need arose, add new units with separate responsibility and vary the individual manager's scope according to his particular inclinations, experience and capabilities.

"For instance, a separate quality-control department was set up but it covers only the knitting and footwear side of the business; in the other sections its functions remained part of the engineer's activities. A sales manager was appointed with direct responsibility to the managing director to look after the work of the outside representatives who formerly reported to the warehouse departments, and an engineer with special experience was put completely in charge of erecting new knitting machines.

"Given the large measure of departmental autonomy, considerable variations have continued to exist in the formal arrangements of duties within the departments. For instance, managers of production departments and the chief mechanic share in varying proportions the responsibility for the maintenance staff based in the departments. In one department a mechanic is wholly employed adjusting machinery to the requirements of short runs of export goods." (Britain)

"Below the superintendents there are department heads, supervisors and foremen, but the organizational set-up varies from group to group. . . . Although the formal structure of the organization with all the different staff departments gives an appearance of rather strong centralization, there is definitely an atmosphere of freedom all the way down the line. The rapid expansion of the company has brought with it a lot of new problems and a corresponding increase of the staff. Every member of the staff has had more than enough to do to organize his own work which has made him willing to co-operate both with other line executives and with functional specialists. Authority is thus distributed among a great number of persons, and most problems are settled in co-operation with other people. 'I have been with this company for two years. The organization and planning is better here, and you are given more service from the staff departments. There is also an atmosphere of democracy and decentralization. There are very few reports, and everything is done as simply as possible'. (A department head.)" (Swedish engineering works)

"The organization of the manufacturing departments is of two main types. In some of the departments the foremen are direct subordinates to the department heads, who have one or more staff assistants at their disposal. Those staff assistants have no right to give orders. They handle questions concerning machinery, quality control, buildings and equipment, introduction and training of new workers, etc. In others departments the department heads give direct orders to the special supervisors, who in their turn have the foremen under their command.

". . . all department heads are placed on the same formal level. Our interviews showed clearly, however, that their social status within the firm was quite different. If we exclude the assistant managers, who are regarded as of superior status, the rest of the executive staff . . . was divided into at least four, if not five, levels of informal rank." (Swedish cotton mill)

With authority and responsibility diffused throughout the organizations, supervisors had varied jobs and methods, and were in charge of different numbers of workers.

"The strength of supervisory staff varies greatly: there are about 110 supervisory staff, e.g., foremen, forewomen or charge hands, in the head factory which employs about 3,000 workers; but some supervisors are immediately responsible for as many as 80 workers, while others supervise 20. Their responsibilities usually include giving out work and materials, and normal supervisory duties. Some forewomen have an assistant to help with the routine tasks. There are also many *ad hoc* arrangements by which the workers themselves take over some of the duties, such as looking after incoming trainees." (Britain)

"The present staff of supervisors and foremen is recruited from among the workers. They are generally young, and all have been promoted to foremen class since 1939. It is possible for the foremen and supervisors to be promoted to department heads, even though they have not had the formal education which is generally required in other firms for these posts." (Swedish engineering company)

Disciplinary action generally provided an exception to the tendency to diffuse authority and responsibility throughout the organizations. In that case the recent trend seemed to be in the opposite direction. That the labour shortage prevailing in some countries provided at most a partial explanation for greater care bestowed on problems of discipline was borne out by the Italian organization. There, despite heavy unemployment and poverty in the area, any disciplinary action of greater seriousness than a verbal reproach could be imposed only by the manager of the factory.

"Every supervisor is allowed to propose that a member of his immediate staff be subjected to disciplinary action. For this purpose he has to show a written report to his own immediate superior, e.g., the foreman to the shift-head. The shift-head considers the report, listens to the workman who is to be punished and then proposes punishment to the manager; only he decides and punishes. The worker is allowed to justify his behaviour and to defend himself before the disciplinary action takes effect. He is also permitted to appeal to the 'Interior Committee', which is elected by all workers. If the committee considers that the incriminated worker was right, or that there were mitigating circumstances, it can step in and defend him before the management. After disciplinary action has taken effect, the worker has also the right to appeal to the top management." (Italy)

Technical Specialists

The British and the two Swedish undertakings—the three studies in which particular attention was paid to this point—sought to promote co-operation between functional specialists and executive management primarily in two ways: first, they stressed the service function of the specialists; and secondly, they left the formal organization sufficiently flexible to allow all sorts of adjustments to be worked out between executive management and service departments. Line managers, even when they had not at one time been specialists (as they had in the Italian works), tended to be recruited from staff with a technical background.

These policies did not prevent arrangements whereby technical specialists reported in the first place to their own rather than the production department, and in some matters the specialists took effective decisions. The following two paragraphs are taken from the study of the Swedish engineering works.

"In the various departments there are also functional specialists, who do not take orders from the department head, but report to the head of their respective staff departments.

". . . Hourly wages are decided upon by the superintendents, but before wages are finally fixed the head of the time-and-motion-study department must be informed. Piece rates are of two different types. In the one case, the piece rates are set after the work has been studied by a time-and-motion study officer. The final authority then lies with the head of the time-and-motion study department, who decides upon the piece rates after having informed the department manager. In the other case, piece rates are set by a special group of people within the time-and-motion study department, without any formal studies. This system is used when new details are introduced and methods have been changed, and there is no time for formal studies. The leader of the group has earlier held the positions of foreman and supervisor, and all the other members have experience on the particular job. In some cases, e.g., when raw materials are changed, the supervisors and even the foremen have the right to adjust the piece rates."

The Personnel Function

All five organizations had personnel officers and personnel departments. Usually the personnel officers were basically in much the same position *vis-à-vis* executive management as were the technical specialists; they combined reporting to executive management with reporting also to their own department, and the advisory function with taking final decisions on such matters as selection and placement. Their position differed inasmuch as their responsibilities usually covered the whole organization rather than a single department, and they were consequently immediately responsible to the technical manager or director or other member(s) of higher management. The British firm had a director of personnel as a member of the board.

The number and organization of specialists concerned with personnel varied widely.

"The personnel department is comparatively new in the company. Factory, housing and welfare services are old institutions, but the first step in the direction of a modern personnel department was the hiring of a personnel counsellor in 1943. Today it has 10 people on its staff, which means that there is a personnel officer for every 110 workers. That is an unusually high figure for a Swedish firm. The department has little to do with the salaried staff which in personnel matters is under the supervision of the comptroller. . . . In its main character the department is a staff agency. It has no representatives in the various manufacturing departments." (Swedish cotton mill)

"The personnel department is separated from the employee services department, an arrangement which is almost unique among Swedish industrial firms. The function of this department is to handle all questions concerning salaried employees, personnel records, employment, transfers and promotion of workers. . . . Although he (the head of the department) has to report to the managers of manufacturing

and of sales and finance, he has close contact with the managing director in questions concerning personnel policy and organization."

(Swedish engineering company)

"Personnel, wages, training, surgery and canteen are organizationally distinct. . . . All have continued to be formally directly responsible to the director. . . ."

(Britain)

The Swedish and British studies give some instances of the ways in which the personnel officers co-operate with executive management and others for which they take sole responsibility:

"Department heads and superintendents have the right to decide how many workers shall be hired in order that the department shall be able to carry out the manufacturing process given by the planning department. The recruitment policy is a matter for the personnel department which also has charge of the actual recruiting. . . .

"The personnel department decides to which department an applicant shall be sent. . . . As soon as the test results are available the personnel department arranges an interview between the applicant and the head of the department where he may be going to work. The department head does not do the actual hiring but informs the personnel department whether he has accepted the applicant or not." (Swedish engineering company)

"The employment officer has a right to refuse any applicant, but before hiring a person he must have a conference with the department head concerned."

(Swedish cotton mill)

"If a new employee does not seem fit for the job . . . the decision whether instruction shall be stopped or not is usually taken by the department heads . . . the department heads and superintendents are authorized to decide upon questions of discipline . . . transfers within a department are decided upon by the department heads. Transfer to another department is a joint matter for the personnel department and the other departments involved. . . . Promotion within a department is decided upon by the department head, but the personnel department will as a rule be informed beforehand." (Swedish engineering company)

"Today whole-time instructors are placed in certain departments. . . . If a worker is proposed for promotion to foreman the matter is handled jointly by the department head in question, the head of the personnel department, and the assistant manager." (Swedish cotton mill)

"Since systematic selection was initially wholly the responsibility of the training department, and subsequent action was always closely associated with that department managers of production departments had additional grounds on which to consult with the training centre manager.

" . . . For instance, a shop supervisor came in to see the training manager one day about a girl who was engaged on a lower grade operation in the finishing of ladies' outer garments—sewing parts of the dress not readily visible to the eye—and wished to be promoted to higher grade work—fine seaming on the outer parts of the garment. The training manager examined his records and found that the girl concerned had been keen from the start to do the high-grade work, but that her work in the training centre combined with the results of selection tests, had thrown doubt on her ability to do this; they had agreed with the girl that she should do the lower grade work until her skill improved. The supervisor stated that in her opinion the girl's work had not improved sufficiently, and agreed with the training manager that the girl required a few more months before a final decision could be made." (Britain)

Some of the firms were far advanced in the training of executive management in appreciation of personnel problems and of the

potential contribution of the personnel department. The British firm for instance had gone as far as regarding several months' work in the training department, where personnel aspects were highlighted, as a regular step in the advancement to manager of a production department.

The Worker's Responsibility

As a matter of policy, the organization placed great responsibility on the workers, both individually and collectively. This found expression in a variety of ways, e.g. in leaving workers some discretion in organizing their work, in generally treating them as responsible persons, and in involving them in policy making and in some administration. In addition, all organizations had machinery for formal discussions between management and workers.

Sometimes the worker gave verbal expression to his appreciation of greater freedom, like this Swedish textile worker:

"The planning is better here than in the company I worked for before, and the direct supervision is much better here, because the workers are allowed more freedom and can plan their own work."

Others workers showed appreciation by the way in which they behaved under new conditions.

"The third object of management was to abolish as far as possible the feeling of class distinction between manual workers and intellectual workers. It was felt that one of the factors in the creation of this sentiment was the feeling of insecurity of workers paid by the hour, in comparison with the relative security of those paid monthly.... Accordingly, all hourly wages have been replaced by monthly wages, and this measure has not increased absenteeism." (France)

"You must treat the men as individuals now. I have for example, a boy, who lives far away from the factory and I know that it is not always easy for him to be in time on the job, so I have got to help him a little, even if he does not always behave according to the rules." (Foreman in Swedish engineering company)

The workers are encouraged to take an interest in their own and the company's activities and suggest improvements, and, in the French organization, they share in the profits in proportion to their formal responsibility.

"The directors are inclined to let persons who suggest changes try to carry them out and thereby ensure that the change is designed to meet a real need and that it is introduced as fast as, but no faster than, the situation allows." (Britain)

"The second aim, which has been pursued since 1937, has been to interest the *whole* of the staff in the prosperity of the undertaking. In order to do this, a working account is drawn up monthly, according to an established system of accountancy, and 50 per cent of the net profit after deduction of all costs and amortizations is then shared among all the members of the undertaking; the balance is paid to capital. The management considers . . . that the mobile *percentage* of the salaries should increase in proportion to the degree of responsibility involved. The sharing of profits is therefore carried out on the basis of a scale which runs from 1 to 21, and not from 1 to 6 as in the case of the fixed salaries." (France)

The British company had experimented in re-organizing production so that permanent small groups of workers were responsible for completing a product, and had found the result so satisfactory that they were changing over the greater part of manufacture to this method of working.

"It took three months to evolve a satisfactory new breakdown of the manufacturing process and the composition of the first team. The results exceeded expectations . . . the advantages of teamwork *qua* teamwork became clear. With the workers organized in permanent groups whose members depended on one another in many ways, group standards grew up concerning late coming and absenteeism, and standards of work. Yet members continued to be paid according to their individual output, and there were wide variations in earnings. (Group payment introduced experimentally for earnings above certain basic rates of pay was discontinued upon the workers' request.) The dependence of group members was, therefore, probably based less on material consideration than on the values of close personal association, the continuity of which depended on satisfactory work. And the standards were probably set in the light of this agreeable personal association at work and transmitted by example and experience.

"In many cases unit production grouped together workers who had traditionally tended to be hostile towards each other . . . traditionally the knitters and mechanics were habitually blamed if anything went wrong in the finishing departments. But the people at whom the criticism and resentment were aimed were an amorphous set who worked in the knitting shop some distance away from the finishing departments. There was more satisfaction in being angry with people nearby; and so the seamers traditionally blamed the linkers, and the menders blamed both. As long as linkers had sat in one group, seamers in another and menders in a third, the strain between them had been regarded as an inevitable corollary of hosiery production—and possibly not altogether regrettable since it could be assumed that this rivalry was a sort of check on quality of work.

"Unit production changed this. In the case of fully-fashioned stockings, two linkers, three seamers, an examiner and a part-time mender worked together as a team and were supplied, whenever possible, with hose from the same knitting machines. There was a considerable reduction in the amount of damaged hose, and in times of difficulty a spirit of co-operation tended to take the place of inter-group hostility.

"Successful attempts were made to enlist the co-operation of the teams in helping to plan the change-over to a new style of garment. Often they knew better than anybody else one another's special aptitudes and likes and dislikes, and, given a job, could sort it out largely among themselves." (Britain)

On a wider basis, workers could be associated, through their representatives, with working out such matters as job evaluation and cost-of-living allowances. Thus, in the French electrical equipment works,

" . . . to give the staff the feeling of justice which generally prevails when salaries are calculated according to the qualifications required for each particular task . . . the management, the engineers and the foremen co-operated with the workers' representatives, and proceeded to classify in a rational manner the 600 jobs carried out in the undertaking.

"Salaries are adjusted when the average variation of the cost of living index exceeds by 10 per cent that of the 12 preceding months, on condition that gross profits show an increase corresponding to the sum necessary to meet the adjustment in wages.

"The official cost of living index was accepted after a Cost of Living Committee consisting of four workers—three men and one woman—had conducted an enquiry and agreed that the official index corresponded with reality." (France)

Works committees or councils had the right to participate in many important matters and were frequently associated with yet more. In France and Italy, where the setting up of works councils or committees was obligatory and some of their rights were laid down, the activities of these bodies generally extended beyond the scope prescribed by law. The French works committee, for example, had access to the firm's financial records and could ask for explanations of them; it could also investigate the workings of the (Quaglioni) system by which the staff from the level of team leader to that of departmental manager checked their activities.

The British organization had not only set up formal machinery for joint consultation but had also provided for joint committees at departmental level:

"The organization for formal joint consultation started early in 1950. Briefly a works advisory committee was set up 'to discuss matters of a general nature affecting the progress and efficiency of the factory', and departmental committees to deal with problems relating to departmental needs. The Works Committee consists of seven workers and seven management representatives, with a management-appointed chairman and a permanent secretary. Meetings are held once a month in works time. Minutes are kept and circulated to the board of directors and to departmental managers, and a bulletin of concluded business is circulated around the factory. Representatives hold office for two years, with half the committee being elected annually to ensure continuity. The committee does not concern itself or interfere with the functions of management, nor does it discuss a matter likely to become the subject of an agreement between the company and the trade union.

"Departmental Committees are of a size suitable to the department and rather less formal. Each consists of the manager as chairman, and elected worker representatives, including a supervisor if the manager desires, and usually a member of the personnel department. Meetings are held once a month, and the managing director receives a copy of the minutes."

Most of the organizations studied had joint or wholly workers' committees in addition to the central works committee or council. The Swedish cotton mill, for instance, had, in addition to the Labour-Management Committee, committees dealing specifically with safety, fire prevention, study outside working hours, and with employees funds; and also so-called "evening clubs", for which the head of the personnel department and the counsellor invited the department head, the shop steward, and the workers of one department at a time to discuss the problem of absenteeism. Some sub-committees of the works committee were responsible for the social affairs funds, the sports club, or the canteen. The canteen in the Italian factory, for instance, was in the charge of a subcommittee of the "Interior Committee", consisting of workers.

The connexion between internal machineries for workers' consultation and participation and the trade unions represented in the organizations varied in strength and nature. The Italian "Interior Committee" was both the smallest trade union organism and also a proper repre-

sentative body inside the factory, since all workers, and not merely union members, took part in its election. "But the Interior Committee is closely associated with the trade unions and its members generally belong to one or other of the trade unions." The Committee's terms of reference therefore included trade union matters, which were explicitly excluded, for instance, from the concern of the works committee of the British company.

In the two Swedish firms the workers were fully organized: there was no formal closed shop, but the managements were not interested in hiring workers who wanted to stay outside the unions. The works councils, therefore, consisted wholly of union members and included union officials. Despite this, the terms of reference of the works councils excluded union matters, which were discussed between management and union officials direct. In both organizations one or two officials, and not necessarily the most senior, were usually entrusted with the negotiations.

"The club president who works in the spinning department is a communist. The shop stewards and the other officials in the club belong to the Social Democratic Party. The real authority lies with the vice-president, a woman between 50 and 60, who is a weaver. She is as a rule the sole delegate when settling disputes in the weaving department, while the club president usually calls for her assistance to settle disputes in the spinning mill. Her influence on her fellow workers may be illustrated by the following incident which happened some years ago:

"When rationalization was introduced in the weaving mill the management wanted each weaver to take care of almost twice as many looms as she had had before. On this demand the female weavers threatened to quit. The club's vice-president, who was away on leave of absence at the time, was called back by the management, who were fully aware of the fact that they had to ask for her assistance. She convinced the weavers that this step would be to their advantage, if the management agreed to unchanged piece rates, which the management did. Without her assistance the question could never have been settled in such a quick and efficient way." (Swedish cotton mill)

"The club president, who is a Salvationist, has held his position for eight years. Election of club officials occurs once a year. . . . Negotiations are in most cases carried out by the president alone, and they are frequent. They have more the character of discussions than of disputes and there is a definite atmosphere of co-operation between the union leaders and the management. There is a local branch officer in the town, but he has never had anything to do with the relations between the company and the club." (Swedish engineering company)

The chief trade union member of the British organization, who also occupied one of the highest positions in the national trade union, was an instructress on the staff of the training department; and the president of the foremen's club in the Swedish engineering company was a former president of the engineering workers' club.

Welfare and Activities Outside Working Hours

All five organizations take part—some an extensive part—in providing their employees and their families with amenities and services in their

leisure hours, but couple this provision with the policy of not doing "too much" and taking care not to interfere, or appear to interfere, with the private lives of their workers. This combination appears most clearly in the two Swedish studies which list numerous welfare activities supported by the organizations but stress that, in the case of the cotton mill, "the management holds that services to the employees shall be given only insofar as they promote efficiency", and in the case of the engineering company, "the welfare services do not cost the company anything but are financed by the interest on the savings funds". Thus the Swedish cotton mill has established factory nurseries "on the grounds that female workers cannot hold an industrial job without convenient facilities for taking care of the children"; and the management had told the trade union that it would shortly discontinue a special bus service which cost more than seemed justified by the employment of some workers living in outlying areas. In both cases, the financial contribution to employees' recreational activities was held to be "rather limited compared with many other companies".

In the Swedish engineering company, as in the Italian and British organizations, welfare was the earliest part of the personnel programme, and the first part to be separately organized.

"The present personnel programme in the company started with an employee services department in 1945. Under the head of this department are sections for welfare services, for housing and recreation, and also a vestibule school. The welfare services are regularly used by 60 per cent of the employees. To members of a saving club the company pays a dividend of $3^1/_2$ per cent. Loans are given for the building of houses, purchasing of automobiles, furniture, etc., and for helping employees to straighten out their private economic difficulties. The section staff sees that deductions are made from salaries and wages for rent, insurance premiums, telephone bills, etc. and arranges these payments for the employees. . . . The employee services department also takes care of the contact with the different employee clubs, e.g., art club, athletic club, bridge club, orchestra, etc. When a new club is started, the head of the employee service department as a rule acts as chairman for the first year. The company has built a special house for all these recreational activities. . . . The head of the employee service department acts also as personnel counsellor." (Swedish engineering company)

Sports, cultural and educational activities, and financial provision of one kind or another for individual workers featured in all welfare programmes. In addition, the Italian organization sought to support the traditional standards and practices of the area: they employed a Catholic priest who, among other things, prepared the workmen's children for their first communion and their confirmation—for which ceremonies each child was given a white dress; and at certain religious feasts the firm followed the tradition of distributing gift parcels with toys, sweets and clothing to all workmen's children younger than nine years.

A number of executives of the organizations played leading parts in the affairs of the towns and areas in which they worked, as also in their trades' councils. In the Swedish cotton mill the managing direc-

tor's participation in many public and other commissions was held to contribute to his tendency to delegate most of the daily executive work to his two assistant managers. Senior executives of the British organizations held leading positions in a variety of organizations in the town. The head of the personnel department of the Swedish cotton mill had many contacts with organizations in the town and was also in charge of public relations.

"The head of the personnel department is a young man who has been with the company for only $2^1/_2$ years. He has a university training in psychology and a very wide practical experience. He has worked as office boy, has been unemployed during the depression years in the thirties, has been the leader of a Socialist boys' club, and an official in a public temperance agency and a public employment agency. One of his main functions in the company has been to take care of the public relations. The reputation of the company as a working place was not too good before the war, and great efforts have been made lately to bring about better co-operation with the local institutions in the vicinity of the company."
(Swedish cotton mill)

Adaptation

All five organizations had adapted themselves successfully to many changes, and most had grown rapidly in recent years.

"The undertaking . . . was established in 1924. Its staff consisted then of 20 persons, of whom 15 were factory workers, housed in fairly simple premises. In 1939, the number barely exceeded 300 workers. . . .

"Since the Liberation, its activity has developed in order to meet the immense demand for automatic electrical equipment. Its labour force increased from 447 in 1945, to 612 in 1945, 756 in 1947, 936 in 1948, and now includes 1,300 persons distributed over three factories.

". . . Thanks to a well-equipped research department, the undertaking has made constant progress, and has succeeded in preserving its lead in the technical sphere, so that it is able to place on the market different types of apparatus which are much appreciated by consumers. The standardization of spare parts and of complete products and the development of a very thorough technical planning of the work has made mass production possible.

"In France the company has a network of very active commercial agents. In addition, it has branches and distributors in Great Britain, Italy, Belgium and commercial agents in Spain, Portugal, Sweden, Norway and Brazil." (France)

"In less than 10 years the relations between management and workers, and between the firm and the trade unions and the community, have drastically altered. Systematic quality control dates from 1944, systematic training and the personnel department from 1945. From these beginnings change has spread through the organization—new machines, new layouts, unit production, more adequate selection and supervision, growth, new factories.

". . . Between the end of the war and mid-1950 the labour force increased from 2,000 to 3,800, of whom just over 3,000 worked at the parent factory. . . .

"In the process of change the organization has become considerably more complex. Besides the three branch factories, two new production departments have come into being." (Britain)

"In 1943 the factory was completely destroyed by air-raids. . . . Soon after the war, top management, whose head-office is in Rome, started to rebuild the factory. . . . The former labourers, who became unemployed in 1943, contributed to the rebuilding of the factory by their manual labour, salvaging what was left after the bombing and taking part in the rebuilding." (Italy)

"One example of the rationalization efforts (of the Swedish textile industry generally) is the increase in the number of automatic looms. In 1930 40 per cent of the looms were automatic; the corresponding figure for 1946 was 75 per cent. . . .

"The rationalization process (in this company) has included heavy investment in new equipment. Production is now about 150 per cent higher than in 1935. During the same time the number of workers has declined by 200 persons while the number of executives, supervisors, and other salaried employees has increased by more than 100." (Swedish cotton mill)

"It was only during and after the second world war that modern mass production was introduced. During the years 1940—45 the manufacturing programme was changed over completely to war production.

"The company is not a member of any cartels and is working under severe competition from foreign manufacturers. It has lately started an export drive and has at present a sales organization in six countries. . . .

"During the last 10 years many new buildings have been erected, including a mechanical workshop, an assembly shop, a vestibule school, and an office building. The foundry and another building have been modernized. Part of the expansion is due to the purchase of a company in the immediate neighbourhood. The workshops will be still further enlarged during 1950.

"When the last period of expansion started in 1940 the company employed 750 workers and 150 salaried employees. The number of workers is now 1,620, all of which are male, and the staff of salaried employees numbers 525. . . . During the last 10 years the company's production has increased sixfold."

(Swedish engineering company)

In the two Swedish organizations these major adjustments followed financial difficulties in the 1920's and 1930's. In the British organization the pressures for change stemmed mainly from the serious shortage of skilled workers and from difficulties connected with the supplies of yarn and the export drive.

The following are a few examples of detailed changes effected in the operations and structure of the organizations:

"The problems which required the most urgent attention were how to control standards and quality, how to enlarge the skilled labour-force, and how to obtain additional space for production. It was possible to take steps in connexion with the first two problems, quality of production and skilled labour, which could be effective at an early date. In the process of effecting change in these limited areas, related problems of policy and organization forced themselves on the attention of the firm. These were followed up. And in this way the arrangements made to deal with the problems of quality of work and skilled labour became channels through which much wider changes came to be effected and the atmosphere of change was diffused throughout the organization. . . .

"The need to enlarge the skilled labour force was met mainly by developing systematic training for skilled operations. As in the case of quality control, the development of training opened up many other problems . . . and indicated and helped in their solution. But the establishment of training as a recognized function, and of the training centre as an institution which was acknowledged as valuable throughout the firm, met with many serious difficulties; for there was no experience of systematic training in the industry, the operations for which training was most urgently required were most intricate, responsibility for training was transferred from the managers of production departments to the manager of the central training department who had equally direct access to the directors, and the new manager had no well-established relations with many of the managers of production departments. There was a long period of general scepticism about the value of the venture of experimentation before training was successful, and of sustained resistance on the part of managers of production departments.

"Before they would make full use of it, they had also to be reassured that the activities of the training centre were not designed to infringe upon their authority. For this purpose the directors and the manager of the training department stressed the fact that the new department was a service department, and that it was largely up to the production departments to decide how much use to make of it. This permissive attitude was maintained in the face of severe testing by the production departments.

" . . . the main difficulties were social difficulties. People were naturally sceptical of an innovation which went right against common experience and understanding, and they opposed it when it threatened to upset established relationships which had grown up in response to then existing conditions, and which were maintained usually with very good reason.

"For instance, managers naturally allocated trainees to the old machines in the department. This was established practice. It also ensured that as great an output as possible would be obtained from the very scarce new machines, since they were operated by the fastest workers. And, selected for their capacity for independent judgment and for strength of character after long years of experience with the firm, they naturally resented the transfer of some of the functions which they had carried out satisfactorily in normal times, to a new department of unproven ability.

"The effective reduction of difficulties depended therefore, on convincing . . . the managers that the nature and size of the problem had changed so much that no single one of them had the resources to solve it—in other words, that the change was demanded by the new conditions and not by personal failure. And it also became essential to convince the firm and community in general that the innovations could provide an effective solution without radically upsetting established relations and practices. It was a first necessity, therefore, that those whom the change was going to effect should have full opportunity to appreciate the need for change and the implications of any suggested innovations. As long as they felt that traditional methods were criticized and that the patterns of relationship and behaviour of which the traditional methods were only a small part were likely to be substantially upset, the introduction of anything new, irrespective of whether it was a new process, a new machine, a new way of behaviour, or a training department, tended to arouse anxiety and cause frightened action on the part of those closely identified with the existing arrangements.

" . . . when training schemes were being devised and when, in particular, the movements of experienced workers were being studied, many improvements in physical working conditions suggested themselves and were immediately applied in the training centre. For instance, with work-benches and seats of uniform heights, workers could not adjust their position to the machines to suit their convenience. Seats were therefore designed which, though fixed to the work-benches, were freely adjustable in all directions. Lighting was also improved, and machines were regularly overhauled.

"Similar changes could well be made in the production departments and became more urgent when trainees were transferred from the training centre. In February 1945, machine maintenance in production departments was regularized; and in time the improvements made in the training centre were generally applied. This movement continued: further improvements were made in the training centre and passed on to the production departments; and the training centre became a recognized place in the firm for thinking out, and trying out various technical developments and alterations in working conditions.

"The policy of placing new machines in the training centre and transferring them into the shops together with the trainees, eventually covered new and later types of machines in addition to new issues of machines in general use.

"Concern for improving the worker's environment drew attention also to some deficiencies in lay-out and work-flow which were increasingly taken into account. For instance, the low grade of work of one girl sent to the training department for retraining after two years' experience, could be attributed, first, to the situation of her machine in a dismal corner of the department, which 'got her down'; and

secondly, to the variety of styles she was called upon to do, which was greater than her span of attention permitted.

". . . towards the end of the war, with consumer goods in short supply, workpeople were greatly tempted to pilfer articles made in the factory. Here in fact was a problem of personal adjustment. The personnel department tackled it by setting up a factory shop where employees could purchase, every few months, a fixed quota of goods made in the factory. In this way, not only was pilfering almost certainly greatly reduced, but employees were given the opportunity of possessing the goods they had helped to make and of exhibiting their craftsmanship to their families and friends in the community. . . . The formalization of joint consultation and of managers' and supervisors' meetings also started with the need to meet a definite problem. Prior to 1949 there was little thought of setting up any machinery for joint consultation: informal contact seemed adequate. But late that year there was some quite unexpected opposition in one department against the introduction of foreign workers: in other words, the established lines of communication had clearly failed in this instance. Thereupon outside advice was sought, and joint consultative machinery was evolved to supplement the traditional modes of communication." (Britain)

"When the manager was first appointed, the factory had a system of punishment by fine which was so drastic that it affected as many as half the workmen every day. The manager studied the psychology of the Neapolitan workman and found it greatly different from that of the North Italian workman. He therefore instituted the present system of discipline. This is quite strict. But in applying it the manager tries to maintain familiar, even cordial, relations and to avoid unduly hurting the workman's feelings. For the Southern workman feels the need of trust and something close to friendship from his superior. Nowadays fines are rarely imposed, and the more serious punishments very rarely needed . . . a timely reproach from the immediate superior or from the head of the workshop, or a written note of warning from the manager in more serious cases, are sufficient to maintain satisfactory discipline." (Italy)

"It took a very long time to introduce time-and-motion studies here. but they hadn't the right people in the time-and-motion study department to start with. Now everything is different, there are new people, and it often happens that the workers themselves ask for studies." (Union official in Swedish cotton mill)

"We foremen are much better informed now. Only a couple of years ago it often happened that the workers were informed by the shop steward about things that we knew nothing of." (Foreman in Swedish engineering company)

Since circumstances and needs continually changed, the process of adaptation had likewise to be continuous. Some of the problems which the organizations were facing when the studies were carried out were described in the British and, more particularly, in the Swedish studies.

"For instance, the supervisory structure needs to be strengthened. Formally established supervisors have found it increasingly necessary to share their duties with full-time helpers, or with operatives to whom they have given, *ad hoc*, some additional responsibilities. The need to shed some of the load has probably arisen from the greater attention they feel required to give to their primary duties: for instance, though it has always been customary to make some allowances in the hours worked by married women, the proportion of women workers who ask for some concession in the normal day has increased very greatly, and this means extra care to ensure an even flow of production. Again, problems of all sorts outside the factory, but affecting the performance of workers within it, demand greater attention from the supervisory staff. Since these increases of pressure on the supervisory staff are likely to be permanent, it may well be possible to support informal arrangements for shedding the load by such formal steps as providing more helpers or increasing the number of supervisors." (Britain)

"On the whole, the foremen seem to be a little isolated from the other salaried employees. They are recruited from the workers, while the department heads and their assistants join the company as graduates of technical schools and are never placed in a foreman's position. . . . There is a lot of gossip in the various departments and in many cases workers seem to 'know' a lot of things regarding other departments which are not according to the facts. The average worker does not seem to be very well informed about the factory as a whole, nor does he appear to desire much information. . . . The informal communication system is good between workers and foremen, and between department heads and top management, but there seems to be a lack of communication between the foremen and the department heads. . . ." (Swedish cotton mill)

". . . we personnel people . . . have no real contact with the dominant personnel problems. The top management sometimes decides vital personnel problems within our field without asking us first. . . . "

(Member of staff personnel department, Swedish cotton mill)

"I don't believe much in the personnel department. There is too much red tape connected with it. Before we had a personnel counsellor, when a worker was injured, we just called for a taxi: and gave him a 10-crown note to pay the fare to the nearest clinic. Now there are a lot of forms to fill in and a personnel counsellor has to accompany him in the taxi and hold his hand."

(Foreman, Swedish cotton mill)

". . . it seems that the workers in the old and small workshops feel happier than the workers in the new shops. These new shops are regarded by the workers as too large. There are too many people in the same room, and the different departments are not divided by walls. This arrangement makes the formation of natural working groups more difficult, and the workers get a feeling of not belonging anywhere. In the old shops the various house rules are less strictly enforced. Even if the official attitude of the union is that of appreciation of what the company has done with regard to work facilities, wash-room etc., many workers seem to prefer the conditions as they were earlier. . . .

"When the workers are being most critical, the questions of unskilled work and time studies are generally brought up. But the criticism is not so much against this particular company as against the general trend in the industry."

(Swedish engineering company)

"I have worked for a couple of years in a small workshop. It was often hard and difficult, but you had more freedom and could plan your own work. In this company almost all jobs are unskilled and I really miss the responsibility I had before. I think the workers do not have responsibility in any of the larger shops."

(A worker)

". . . They have to give us more responsibility in the work; otherwise one does not care much about production, and the whole job gets meaningless. I think they could find a way to give us more responsibility even in mass production."

(A worker)

". . . many workers and some foremen seem not to be too well-informed about the company. Department heads meet their superintendents regularly, but do not seem to carry the information gained at the meeting down the line to their subordinates. . . ." (Swedish engineering company)

"The office staff is so large now that we do not know each other, nor what they are doing in other departments. The expansion has been so rapid that management has not had time enough to give us information. I think that both clerks and workers should be informed in small groups. A couple of years ago it happened that the work had to be stopped for a few days in one of the shops. The assistant in charge of manufacturing then arranged that the workers of the department should be given information about the company. I know that such a programme would be much appreciated among the clerks too."

(Member of the office staff)

". . . a marked tendency to restrict output among certain workers . . .

exists. . . . I don't think that the boys pretend to work to a great extent, but of course I know that they are not allowed to earn as much as they can when given a good piece rate." (A foreman)

"You can always arrange that the take-home pay does not vary too much. If the superintendent knew this, I think he would change things at once. There was a guy here who thought he could take out 5 : 75 on a job, on which we others were content with 2 : 50, but he was not long here before we had him quit." (A worker, Swedish engineering company)

Most of these problems were recognized by the organizations and some were clearly on the way to solution. Perhaps the best criterion for determining whether adaptation is successful is not its speed or its magnitude but the extent to which it has provided means for continued adaptation. And on this basis the organizations were regarded as successful and sound.

SUMMARY

This chapter dealt with seven organizations which helped to maintain existing communities and five which fostered the growth of new communities. The organizations differed in many respects, as did the situations in which they found themselves. Consequently, the ways in which they set about their problems and the means which they had evolved for coping with them differed widely also. The uniqueness of each case is perhaps the most important fact emerging from the data.

The variations in practice from firm to firm were brought out very clearly by discussing the data under such headings as "top management", "the personnel function", and "participation in community affairs". For instance, on page 41 it was stated that in one firm the foremen had full authority to dismiss a worker. Again, on page 61, the use of astrology in selecting executives in the Swiss department store was reported. In connexion with the same firm, it may have seemed paradoxical to some readers that while a policy of decentralization was followed in matters of human relations, the managing director was his own personnel officer.

It may be questioned whether these are "good" or "consistent" practices. Two comments seem to be relevant: firstly, these practices are reported here not because they are necessarily and generally "good", but because they are parts of the observer's picture of an organization which has been considered effective *in toto*; secondly, what is "good" or "consistent" must be determined largely, but not altogether, by individual circumstances. Thus, astrology may be a useful selection device in a locality where belief in astrology is an important determinant of human thinking and behaviour. Thinking can, in this sense, "make it so".[1]

[1] See Chapter V, pages 131—2.

This point is important because it is so often and so easily overlooked. It is natural, for instance, to question whether the use of astrology is an "application of management techniques developed in the United States". In fact it is. For one of the most effective management techniques being developed in the United States, or anywhere else, is that of adapting management methods to local circumstances.[1]

But we noted that what is "good" practice is determined largely, *but not altogether*, by individual circumstances. An analogy with medical practice may be useful. The doctor knows what is good practice, or rather what the good practices are, in certain broad categories of circumstances. But he must always suit his action to individual patients and their particular circumstances—that is the primary consideration. In this book, the studies have been grouped according to whether (a) the firm helped to maintain a healthy community; (b) was a healthy element in a disintegrating community or (c) fostered the growth of a new community. Within those categories, variations in practice have been shown in sequence. By a combination of these two devices—necessarily a compromise in the technique of presentation—it was possible to show both broad patterns and particular variations in management practice.

Earlier in this chapter (page 36) it was noted that the firms studied were to be "characterized . . . by positive symptoms of adaptation to both the internal and external needs" of the particular firms. It is worth emphasizing in conclusion, that perhaps the most important fact brought out by studies is that each firm had to find its own method of adapting to its own particular circumstances.

The studies, therefore, have three major practical functions:

1. They emphasize that the unit of organization in its environment—i.e., factory or office in its community—is a most valuable unit for study.
2. They provide data on some organizations which have succeeded in the two major situations of modern industrial society where the two communities described in detail in Chapter I showed symptoms of failure: i.e., the present organizations have either managed to maintain community instead of disintegrating it, or have managed to become the core of community where none, or little, existed before.
3. The studies support and strengthen, and in some cases perhaps discover, certain general lines of guidance on how to maintain real community or how to foster community in places where it has not previously existed. Together with more detailed studies, of which two will be described in the next chapter, the European studies will afford material from which generalizations and pointers to action may be extracted.

[1] See, e.g., *Management and the Worker*, or Brunner, Sandro and Ensminge, *Farmers of the World* 1945, New York, Columbia University Press.

III. THE PROCESSES OF MAINTAINING AND FOSTERING COMMUNITIES: TWO CASE STUDIES

"*. . . they have set in motion a process and an institution which will ensure for them that . . . they will be able to deal more readily with similar problems in the future by being able to recognize them earlier and by being better equipped to cope with them as they arise.*"

Elliott Jaques.[1]

The studies described in the last chapter were too limited in scope, time and method to describe in any detail the processes by which the organizations either managed to maintain existing communities or fostered the growth of new ones. The pictures the studies conveyed were largely static. Only very occasionally—by way of a bonus over and above what it was possible to expect—did they give a glimpse of how the organizations lived and functioned. And these glimpses were almost wholly retrospective: the studies gave usually only an approximate idea of the time spans in the lives of the organizations and outlined only some of the bigger problems encountered in their development.

To obtain a more complete picture—a moving picture—of the processes involved in meeting the two major problems specified in this volume, recourse must be had to more detailed analyses. Two additional studies recently carried out in Great Britain, have therefore been drawn on. The first, the work of the Field Research Group of the British Institute of Management, describes the processes of introducing skilled factory employment into a northern mining village.[2] In this case, methods were applied which led to the effective integration of incoming industry in the existing community. Within a short period the new factory became an established social institution. This success was reflected in the speed with which the new factory became financially solvent; in the rate of output; in recruitment, labour turnover and absenteeism; and in many other and more complex ways. For the

[1] *The Changing Culture of a Factory*, London, 1951, Tavistock Publications, p. 105.

[2] "Introducing Factory Employment into a Small Community", in *Three Studies in Management*, by Jerome F. Scott and R. P. Lynton, London, Routledge & Kegan Paul, Autumn 1952.

initial six months, starting with the opening of the factory in May 1948, the research worker collaborated with the consultant charged with the project; and intermittent contact has been maintained with the factory since that time.

The second and more intensive study was part of a continuing project in which the Tavistock Institute of Human Relations collaborated with an engineering company, The Glacier Metal Company, Ltd., situated on the outskirts of London. We propose to concentrate here on one of the five projects reported in 1951.[1] At the request of the management and the workers of the service department, the research team assisted them, in an advisory capacity, in discussions on whether or not they should change over from piece-rates to hourly wage rates. This problem was the starting point for much wider consultation and subsequent changes.

By the time this sub-project started, the Institute and the company had been in touch for about three years, and field study in the company had been building up over six months. Other sub-projects were carried out concurrently. For six months, from January to June 1949, one or two of the five members of the research team attended, and advised at, the numerous formal meetings held in the service department on the wages issue, and such other meetings as were agreed to. The present study was jointly prepared, and was subsequently approved by all concerned in the project, and contact continued to be maintained with the department.

Much that is of interest in the studies cannot be dealt with here. We propose to concentrate on those aspects which seem to be most clearly relevant to the process of maintaining a community in the one case, and the process of community-making in the other.

THE PROCESSES OF MAINTAINING A COMMUNITY

The first study, as the authors describe it, was "concerned with the establishment of a small branch factory for the finishing of hosiery in a northern mining village—Minetown we shall call it. For this purpose the parent firm secured the services of an industrial consultant with experience in this field. At his suggestion a member of the research staff of the Institute (the British Institute of Management) joined him to record what happened".

The Community

Minetown's 6,500 inhabitants were rather isolated. One thousand three hundred out of the 1,700 employed men worked in the local collieries. There was paid work for only 80 women. With poor housing

[1] Elliot Jaques, op. cit., Chapter 4, "The Service Department" pp. 73—105.

conditions, with few opportunities for spending money, and with local coal mining an industry with an assured future, the general tendency was to accept things as they were. For instance, despite the shortage of employment for women, there was little effort to create more for them. Minetowners tended to regard outsiders and new ideas with suspicion, and this was reinforced by their isolation.

"Briefly, for rather more than 1,000 women of working age there were hardly 80 paid jobs in the local shops, the pit canteens and the one little garment factory. Another 50 were at work elsewhere, 40 of them in cotton mills an hour's bus ride away. As in other mining villages, a steady trickle of girls left their birthplace to work elsewhere, but for the most part the girls stayed to help at home, to marry young and in turn to bring up large families.

"Local employers had gained an immediate advantage by the scarcity of paid work for women. They were used to having 10 applicants or more for each job. Standards of wages and working conditions were low, and occasional abuses remained undetected because the workers were not prepared to lose their jobs in consequence of raising a protest. . . . In the little garment factory the girls were frowned upon for talking or singing at work.

"Management-worker relations were naturally patterned on those prevailing at the pits, where 1,300 of the 1,700 employed men worked. Most of the remainder were employed on the prosperous dairy and sheep farms some of which jutted right into the built up area. Other crafts had practically died out, leaving a clear split between the mining and farming folk. Even the building industry employed only a dozen people, and those were engaged on house repairs; house building was carried out by large contractors who brought their own workers week by week. Built in the immediate vicinity of the various pitheads, both past and present, the different blocks of houses were up to two-and-a-half miles apart. Many of the 1,500 houses were old. Some 60 had been condemned; a further 520 had been declared to be unfit for habitation according to modern standards. Over one-fifth were overcrowded. . . . Mining subsidence or the danger of it, was the main factor that prevented the physical parts of the community from being joined up and, but for an agreement with the previous coal companies, would have prevented any new building.

"The opportunities for spending money, particularly on furniture and other durable consumer goods for the home, were thus limited, yet over a period of years the earnings of the miners had greatly increased and goods had become scarcer. With local coal mining also an expanding industry, there was no pressing need to look anxiously abroad for new industries, or to worry greatly about new ideas and new methods. In fact the community had the reputation of placidly accepting things as they were, of taking a long time over accepting such few newcomers as arrived to stay (mainly in connexion with mine management), and of being particularly wary of people from the South, some of whom had in years back set up and then closed again enterprises of various sorts. There was little impetus to change."

Management's Plans

The work to be introduced into this industrially unconditioned community consisted of some of the most intricate and skilled jobs in the hosiery industry, in particular, linking. The problems of the job and those of the community interacted and raised many doubts.

"... there were numerous occasions when these and the more intricate features of job and community appeared in different forms and under various guises. Two of the many indications of the kind of difficulty presented by the interacting problems even before the first trainee started may be given here as illustrations. There was only the word of a suspect outsider that the job could be done at all and was, in fact, being done in places only 40 miles or so away; why then for instance, had this community been chosen to try this admittedly difficult job? Again, in a community as cut off from other hosiery districts as Minetown, there was no way of estimating likely success or failure in applying for the job or, later, in doing it. The first applicants could not weigh their qualities, however fictitiously, against those possessed by girls whom they knew, and who had been accepted or rejected for work; nor their likes and dislikes against those of girls who had taken to or rejected the job later."

In so far as experience of broadly similar projects could serve as a guide, problems of this kind were anticipated, and the methods of approach were modified accordingly. But some conditions, such as wages, could not be altered to suit the particular case.

"The framework within which the problems of recruiting and training linkers, and of establishing a factory were to be solved existed in rough outline before contact was made with the community. It was built up on the basis of recent experience of similar tasks; of the accumulated knowledge of selection techniques and the lately evolved training scheme for linkers; and of conditions of work that were fixed by national agreement between hosiery employers and trade unions and could therefore not easily be altered in this case even should it have been desirable to do so.

"Mainly on the assumption that the most useful part of a linker's working life ended with marriage, it was intended to recruit single girls, preferably between the ages of 16 and 20. Each applicant was to be subjected to an interview which was to determine whether she was a 'good type' and, in particular, whether she was likely to get on well with other people. . . .

"The scheme for the systematic training of linking had been worked out some years back jointly by one of the leading firms in the hosiery industry, a group of specialists in training, and a university department of applied psychology. . . . It was believed that the trainees' rate of progress was influenced greatly by group attitudes, and it was intended deliberately to foster these. Individual and group targets were among the techniques to be used. There was to be full consultation with the workers. Wages and hours of work were covered by national agreement. . . .

"In both wages and hours the factory was going to compare very favourably with other local employment. Physical conditions, too, were to be modelled on conditions in the Midlands; in some respects they were, even in temporary premises, to be superior. Fluorescent lighting, scientifically arranged, was going to provide adequate illumination for linking. Thermostatically controlled heating and ventilation was held to be necessary in a place liable to have very cold winters and in which mining was considered by some a sheltered occupation. The work-place was to be bright and comfortable, standards of cleanliness high, and tea was to be served twice a day. It was intended to minimize hostility on the part of other employers to these innovations by not engaging, at least initially, any girl already in local employment, and to do everything possible to secure the positive interest and co-operation of the community for the project. Of greatest importance in this endeavour were the decisions to do all training locally and to transfer the management of the factory to local people at an early date."

The formal channels of contacting the community proved inadequate. Subsequent attempts to contact it through community leaders started a large and sustained flow of recruits.

"The normal methods of obtaining recruits were all employed in the second week in May. The local Labour Exchange, located in the burgh some five miles away, was approached. Small posters, to the effect that female workers were required in the new hosiery factory, went up in shop windows and public bars. These methods seemed to have only little effect. . . .

"The next few days were spent in visiting local councillors, the vicar, the solicitor. Through the activities in connexion with getting things ready at the factory, contact was also made with many other people. Through one or other of them the existence of an active girls' club was discovered, and contact was made with the club leader, the school masters and the local press reporter. A group of club members and a class of school-leavers were met. These opportunities were used to get to know more about the community and to get known by them. On the third day, as a result of an article in the local paper published that morning, appeared the first applicant. A group of seven girls from the club applied the following day. There began to be a regular stream of applicants—sisters or friends of those who had already been at the factory, people who had been given the latest news about the factory by the craftsmen still engaged in fitting it up, or by the life assurance agent, or who had picked up information in shops and on street corners as they went about their business. One girl was so dissatisfied with her current employment that she took the whole day off merely to apply. There were 63 applicants during the first month. . . . The flow was greatly reduced in subsequent months, but never ceased, not even when there were no more vacancies and little prospect of obtaining employment before the opening of the permanent factory, months, perhaps years in the future."

Applicants for work were even more anxious and disturbed than applicants for work usually are. The selection procedure was altered to take account of this fact.

"Applicants for work were generally very anxious when they arrived to be interviewed and tested. Some of their anxiety was based on the fears familiar to applicants for work anywhere. . . .

"In this case there were additional grounds for anxiety. There was the very newness of factory employment in the community. It was work of a type at which nobody had been known to succeed. Applicants had, at any rate initially, no guides at all about what made for success. They were conscious only of a few obvious factors: they had learnt somehow that smooth fingers and good nails were an asset and that good eyesight was required. Girls who lacked confidence in the adequacy of their fingers and nails came into the factory holding their hands behind their backs, or wearing thick gloves—in summer—and in the hope that they would wear gloves during selection. For one reason or another the emotional tension was therefore unusually high, in most cases very high.

"The tests yielded no useful results as long as the tension persisted. Several applicants, whose eyes turned out to be perfectly good, affirmed repeatedly and forcibly in the initial stages of the eye test, that they could see nothing at all. . . . The whole selection procedure was geared to removing the tensions of the applicants. . . .

"Unguided interviewing was used to elicit information about the applicant's family background, her previous employment and earnings, her reasons for

wishing to work at the factory, her social relationships in the community and in the case of later applicants, her relationships with girls already in the factory. . . . To have the interview as a distinct part of the procedure seemed initially to add only further tensions, which it took some time to remove. After the first day of selecting applicants, the interview was therefore interwoven with the rest of the procedures. Nothing seemed to reduce the general tension of the applicant more quickly than that she should be made to feel free, and be encouraged to talk freely from the very first. By chatting with the applicant as the occasion arose—in between tests, during the eye test, and while getting tests ready for her to do—two major objects were pursued at once: tension relaxed, thus rendering test results credible; and information was accumulated about the applicant. The applicant left greatly reassured about the humanity of management and the fairness of their methods, and the interviewer secured a wealth of information about the girl and her immediate environment, and also about the community in general."

All but one of the conditions on which the choice of workers of tested ability was based were occasionally waived, mainly in order to procure potential instructors and supervisors. The only principle applied relentlessly was that the girl was likely to be a socially desirable member of the factory community. It was envisaged that this regulation would be relaxed when the factory had got well under way and built up its habits and norms and social structure.

"One of the girls rejected on these grounds shared with two others the distinction of scoring highest in the tests. . . . In comparison with the other girls she was strikingly well dressed. Her hands were fine and well tended but bore stains of heavy smoking. Obviously used to getting 'her own way with the boys', she paid little attention to any girl except her admiring follower."

It was possible to learn not merely whether a girl was liked, tolerated, or disliked by the others, but also whether she herself had any preference for working next to one person rather than another. On the basis of this knowledge, account could be taken in the organization of the factory of the existing social pattern of the community, and it was possible to a large extent to make the existing informal structure extend into the factory.

"Six of the first 10 girls engaged for work were members of the girls' club. Of the first 29 trainees, seven lived in one short street and six in another. One linker, two menders, and the woman who swept up and made the tea were closely related. There were also two pairs of sisters. In four cases close friends worked next to one another. All the other pairs not only knew and, at worst, did not mind each other, but were as nearly as possible of similar age and capacity."

The Workers' Responsibility

Throughout, a great deal of responsibility was placed on the workers, as individuals, as groups and as a community. Methods of training and general management were flexible and care was continually being taken to ensure the workers' participation.

"The training programme previously worked out was only a guide and of use chiefly for determining the sequence of stages. Each trainee had her own programme for each day, worked out each morning jointly by the instructress and herself. . . . Programming . . . provided an occasion for the girl to raise any points of difficulty, and the instructress could form an opinion whether the course was progressing too rapidly for the trainee and thus putting excessive strain on her, or whether there was any other, perhaps personal, reason for varying the programme. Sometimes circumstances conspired to make the trainees feel strongly that they wanted to do the same as other girls who in reality were more advanced than they.

"One day early on, for instance, two girls found themselves isolated at the training bench in one corner while the others had moved on to machines on the other side of the hall. They clamoured to be allowed, too, to go on to machines and their wish was granted even though their training on devices had not been quite completed. On a later occasion Group II wished to try for a bonus at the same time as Group I and were allowed to do so. On both occasions the changes were beneficial in terms of output. More often such alternations proved premature; a fact which, having had their way, the girls readily recognized and accepted.

"Immediate working companions were selected in agreement with the girls; individual and group targets were fixed jointly; any special questions or difficulties were resolved together. In fact, joint decisions were reached continuously. If the value of a training device was in question it was 'talked over' with the instructress and some trainees. Faulty workmanship was jointly discussed and corrected. The girls advised on the allocation of difficult work. . . .

"The change-over to local instructresses provided many occasions of joint effort. They were chosen, with the agreement of all, after only six weeks in the factory. One was a young, vivacious girl, well liked, who had been the first applicant for work. The other was 25 years old, nervous when she came and saddled with a marked feeling of inferiority. . . . She had overcome occasional set-backs, gained confidence, and exerted a good influence on her group.

"Each instructress gave only a part of her time to instructing, spending the rest of the time on building up her own performance. This dual role involved difficult questions of pay: the girls immediately lost piece-work earnings; and they inevitably failed to build up speed on the job as fast as they would have done if they had spent all their time at it. The matter was settled jointly, on the basis of average earnings of selected girls and a small addition; and later, when there was a decline in the amount of training to be done, ways and means were jointly devised to reintroduce the girls as full members of their group. . . .

"On the condition that she would maintain her rate of progress in efficiency a girl was occasionally allowed for some reason to come late or leave early; and in every case where a girl was absent for less than an hour her output for the day was higher than immediately before or after."

The policy of involving the workers, particularly groups of workers, in the affairs of the factory resulted in the rapid growth of a sense of responsibility, showing itself in concern for maintaining high rates of output and regular attendance, and continuous co-operation in matters large and small. This combined well with a general air of freedom in the factory, with singing and numerous other signs of exuberance.

"It became the accepted thing to work on if difficulties had not been overcome to the girls' satisfaction during the day, or if they considered their rate of progress too slow. During the first few weeks this keenness could be attributed to the novelty of the venture. But it never ceased to be common usage to be in the factory at least 10 minutes before, and after, time and to start work early and finish late. Yet there was no work clock for clocking on or off and regular signing on was

discontinued; each operation took less than a minute to complete so that there was no difficulty about leaving the work at any time; and payment for additional output could not explain the pressure of trainees not yet on their own time for continual extensions of the working day. . . . The pressure for extending working time was particularly heavy when work had been held up generally for some reasons, during the day, or when a girl happened to have come some minutes late in the morning and insisted on making up time. This seemed to be only right."

Relations with the Community: the First Three Months

The community had officially welcomed the establishment of the factory, and people seemed to think generally that it was advantageous to secure this new opportunity for employment. But for all that, the attitude most frequently encountered at first was one of reserve. Some leading members of the community were apprehensive for personal or general reasons. Some employers, for instance, feared competition from the factory for women workers. Others worried about the social effects of greater employment for women, or about the implications of the factory's ties with the parent firm in the Midlands. "The newcomers tried to allay and, where possible to remove, all apprehensions, sectional as well as general. The formal means for doing this were limited. There were occasional contacts with the local council for some specific purpose, such as a discussion of possible sites for the permanent factory or a formal visit by the Council to the temporary premises. But there were no speeches or regular forms of publicity. To provide continual opportunities to reassure people about the purposes of management and to associate them with the project, reliance was placed on the numerous and widespread contacts with the community which arose in the normal course of the work."

"Thus, the shopkeeper who was anxious lest she should lose her assistant to the factory was told of the intention to recruit only girls not already at work; and another, that he stood to gain, along with the other shopkeepers, from the increased trade that was bound to follow new employment. A leading lady parishioner who was apprehensive lest the introduction of employment for women should disrupt family life, felt easier when she was told that the factory would employ single girls, many of whom had so far been obliged to travel long distances to work, or had gone away for good, with much more serious effects on family life. The manager of the Co-operative Society was visited and his agreement obtained before one of his staff was recruited (as the future manager of the factory). The husband of a married woman, who had applied for work and would possibly become a supervisor, was consulted before she was taken on.

"There was a parents' day during which the factory, by then already humming with activity, was open to all who cared to come. School-leavers and their parents were encouraged to see for themselves, at any time, the conditions under which they would work if they cared to apply and if they were accepted. Frequently, other people came by quite informal arrangement, and brought friends to see the output graphs, the training devices, the general methods; often they suggested that these things should be in operation elsewhere. There was great stress throughout on the intention to make the factory a local enterprise, with a local manager and local instructresses and supervisors, and a permanent accession to the community."

As a result, "much valuable help was immediately secured. In innumerable ways local people helped to get the factory started and to prevent management from making mistakes, some possibly serious, through sheer ignorance of local facts. They suggested suitable premises. They knew the best way of contacting possible applicants through local clubs, schools and churches. They had the addresses of the most reliable local craftsmen and suppliers whose help was required for erecting machinery and getting the place fixed up for work. They advised against the choice of the site suggested by the local authority for the permanent factory, because only they knew that the stream which looked so low and slow would flood it practically every winter. They were not aware of the value of this help to the newcomers; and the offer of payment for what was to them elementary knowledge to have, and common courtesy to give, would only have aroused a suspicion of the newcomers' motive".

But these were only the beginnings of integration. There were sections and factions in the community who disagreed with one another over many issues and had their peculiar interpretations of the coming of the factory and the ways in which it was being established. For instance, while shopkeepers were assured that their workers would not be taken from them, workers were pleased to note the improved wages and conditions which, they felt sure, would follow the establishment of the factory. Again, it was not possible to follow rigidly the policy of not recruiting anybody who was already in employment. These were only the simplest kinds of discrepancies and inconsistencies. Others were imagined. All kept alive many suspicions.

"The early uncertainties showed themselves in the factory in many ways. Even slight changes in procedure aroused the girls' distrust, and this was kept alive by a suspicious community. . . .

"Occasionally there were rumours, some based on misinterpretations of fact, some without factual basis. The most blatant example was the rumour which circulated about three months after the factory had started—when the girls were showing already that they would be able to do the job well—to the effect that the factory was about to close down and the girls would shortly be paid off."

During this first period, which lasted approximately three months, the community was preoccupied with testing out the newcomers. The newcomers on their part were trying to get to know the patterns of hopes and fears of the community and the best ways of fitting into them. They tried to avoid favouring, or even appearing to favour, any sectional interests, and to maintain a rough balance in the contacts with the community.

More Developed Relations with the Community

As the factory got under way, a number of suspicions faded away and others assumed definite forms. They were dealt with as they arose.

"By mid-summer it had been possible to show in several instances that the assurances given were valid. There had been, for instance, no large-scale exodus of girls from the shops. The summer school term had ended and other employers had found that all the school-leavers they wanted were available for work. The girls had started a holiday savings fund with the local bank. Although a number of shopkeepers had had to raise wages and to spend money effecting improvements in physical conditions of work, the factory girls' earnings were beginning to find their way into the shops, and there were clear prospects of the trickle growing more substantial soon; and so shopkeepers were on the whole satisfied, and even pleased."

The girls in the factory ceased to be merely the channels through which the community's suspicions could be unloaded on the factory and became also the main channels for promoting the cause of the factory in the community. In the factory, "the increasingly secure relationship between the factory and the community showed itself, for instance, in reduced resistance to changes at work, in the absence of further rumours, and in the spontaneity with which help was offered for present or future exigencies". In the community, "an increasing number of people went out of their way to express their appreciation of what had been done, an approval which often took the form of attempts to make social contacts with the newcomers. The factory began to be regarded as a permanent anchor for social relationships and was accepted as a new sectional interest in the community".

Comment

The study suggests that good relations with the community were essential to the success of the new factory, that they facilitated many aspects of its operations, and that they depended on making the branch factory a responsible unit in the larger organization, the community.

"In Minetown the aim was to enable the factory to grow up as part of the community. Failure in this endeavour might well have been serious. In large industrial cities the social pattern of a factory can seriously diverge from what little social structure there is outside, without ever causing an open conflict; the antagonists are not sufficiently organized. In small communities, such as Minetown, where everybody knows everybody else, it is unlikely that any differences that arose between factory and community could have failed to have immediate and often serious repercussions.

"The community's informal channels immediately served to start the flow of recruits. On the basis of knowledge acquired through the selection procedure and through the numerous *ad hoc* contacts with the community, it was possible to take account of the existing social pattern of the community in the organization of the factory. What is known about good organization indicates that a close conformity of the formal to the informal structure may well be a major characteristic.

"An immediate advantage of this arrangement was that the new employees did not have to enter a totally unfamiliar situation. When a girl in a town enters new employment she usually starts as a complete stranger and is expected to build up her social relationships as she goes along. She may or may not succeed. In any case, yet another problem, and more uncertainty, is added to what is already in many other respects a novel situation to which she must adjust herself. In this

factory the girls already knew one another well; and this seemed all the more important in a job like linking which, especially during training, could lead to great tension.

"The process of learning was facilitated by continual adjustment of the methods of training to local knowledge, customs and habits. Initially this required fine sensitivity to all indications that could throw light on the detailed nature of any problem. This became easier as the girls, and the community generally, felt freer to communicate their problems and approvals to the newcomers, and the newcomers began to be more familiar with the community's social structure. . . .

"Success in the whole venture depended on the willingness of the parent firm *to permit its* branch factory the use of managerial methods most suited to its particular *needs. In* some important respects, for instance in training, supervision, and community relationships, the methods used were very different from those employed at the firm's headquarters. The results certainly throw doubt on industry's adherence to traditional methods and traditional areas."

THE PROCESSES OF COMMUNITY-MAKING

The second study was concerned with the processes of working through a series of morale problems in one department of the Glacier Metal Company in London. We will try as far as possible to leave aside the kinds of problems "that arise whenever there are groups of people living and working together" and concentrate on those parts of the study which "were related more directly to the attempts . . . to introduce a relatively new system of human relationships." After briefly describing the background of the factory, the community and the service department, we propose to follow the processes chronologically: problems and methods of overcoming them will be mentioned in the sequence in which they were discussed at the meetings attended by the research team.

The Factory and its Location

The Glacier Metal Company was founded in 1899 to manufacture anti-friction metals. Since the first world war it has become the largest manufacturer of plain bearings in Europe. In 1950 the company employed 1,800 people, of whom 1,300 worked in the factory in which this study was carried out.

The suburb in which the factory was situated had the typical characteristics of little homogeneity and an absence of close ties between factory and community.

"The London factory is situated in the city's north-western industrial belt, a suburban area with a mixture of miscellaneous new industries and sprawling residential neighbourhoods; there is little homogeneity, and no organic relationship between the life of the factory and the life of the community round about. The employees live in widely scattered areas, so that even workmates in the same shop may be members of different branches of the same trade union catering for the craft. The split in modern society between home life and work is particularly marked in suburban industrial settings of this kind."

The first world war and the inter-war years were periods of intensive growth and technical development. Further drastic changes followed during the second world war and its aftermath. The company established several branch factories; and its labour force, which had numbered 1,000 in 1941, at one time reached 3,000.

From 1939 onwards the company "introduced most of the modern methods in progressive management and . . . made certain innovations which are very much its own. The quality of group relations has steadily improved . . . and the firm is now accepted by its members at all levels as a very satisfactory place in which to work". This gains added significance from the fact that before the war the firm had a poor reputation in the community, and was still considered 10 years later a "black spot" by many outside who were unaware of the radical changes which had taken place.

By then the advanced development of social relations had thrown up the new and unfamiliar problems which we wish to illustrate here. Many were regarded by the research team as similar to those which occurred in other communities. Only there they could not usually be discussed because people were not secure enough "to allow either their expression or their recognition". That the problems could be faced and worked through in this factory was an indication of the generally high state of morale.

The Service Department

The service department was one of the seven divisions in the London factory. It employed about 100 people when the sub-project started early in 1949. It was similar to a small company in that it was a relatively independent unit with its own administrative staff, drawing office, and sales organization.

"Until the war years the new shop felt itself to be separate from the rest of the factory. It had its own customers, with whom there was close personal contact, for much of the pricing of jobs was done by direct meeting between customers, supervisors and operatives. This feeling of independence was fortified by the shop's having its own gate and working different hours from other shops; its operatives were not asked to take part in the 1935 strikes; and during the depression years, its members were able to feel better taken care of than other Glacier workers, because the shop was steadily growing and able to take on workers laid off in other parts of the factory."

During the war the activities of the department were increasingly systematized and informal contact with customers came to an end. By 1949, relations in the department, and between the department and the rest of the factory, were regarded by management and workers as not entirely satisfactory.

"In 1947, the shop manager retired, and the present divisional manager and shop superintendent were brought in. They were most anxious, in line with the general

policy of the firm, to establish good relations in the department, and to bring it into closer contact with the rest of the factory, but felt only partially successful. The workers' representatives, led by the convenor of shop stewards of the Amalgamated Engineering Union, remained suspicious, not only of their own departmental management, but of the whole consultative set-up of the factory. They had withdrawn their works committee representatives in 1944 because they considered the Glacier model of joint consultation out of line with normal trade union practices, and had only consented as late as November 1948 to elect representatives once again, for a trial period of one year, during which they intended to consider their position further."

The Nature of the Problem

One of the changes introduced during the war was the replacement of payment by contract for a given job—which the operative would then complete as quickly as he wished—by a scheme of payment by results in which rates were calculated in standard minutes. Forty out of the hundred members of the department were paid according to this system.

The proposal to change over to hourly rates was first mooted by the divisional manager in February 1948. Besides using up time and involving complications in the costing and financial organizations, the system of payment by results was recognized by management and workers alike as one leading to "chronic irritation". The proposal to abolish it was favourably discussed at meetings throughout the year; and on 31 December the divisional manager called a meeting of all operatives and offered an average hourly wage to the piece-workers. This wage was one penny per hour lower than the average earned on the piece-rates system, and pointed to management's main doubt: whether output would be maintained when piece-work incentives were withdrawn.

The workers had numerous other doubts. Facilities were therefore given to the chairman of the (workers') shop committee to carry out checks.

"A 'wages committee', composed of the shop committee, the divisional manager, the shop superintendent and the shop accountant, was set up to consider the matter in more detail. It held its first meeting on 2 January 1949, when the workers' representatives reported mixed feelings in the shop, some workers being in favour, and some suspicious, of the proposed change-over. The latter attitude expressed itself in such comments as 'What are the management up to now?' and 'What are they going to get out of this?'"

It was also decided to enlist the co-operation of the research team "to obtain advice on how to avoid likely pitfalls".

Negotiations about Payment

The chairman of the shop committee spent much of January and February reviewing the wages figures and consulting with his district

trade union officials. Thereupon various meetings took place at which the details of the wages proposal, referred to a sub-committee, were further discussed, and the basis of representation was widened to include supervisors. Though the committees formally refused to discuss anything other than the wages proposal, most time was in fact spent on raising and discussing issues of general morale. For instance, at the wages sub-committee, 25 February:

"... during the next hour and a half not more than 15 minutes were spent on the proposals themselves; the rest went, in discussing a wide variety of general morale issues, such as: how much will the change-over alter the existing relationship among workers, between workers and management, and particularly between workers and supervisors? what happens if wages are fixed and production goes up? what technique can be used to get general agreement in the shop? how will the supervisors behave under such a scheme? can a supervisor be guaranteed that no worker on his section will earn more than he does?

"When the consultant commented that their talk was demonstrating how inextricably the wages proposals were tied up with other morale issues in the shop, the divisional manager suggested that each supervisor might be asked to enquire into the feelings of his section. The shop committee chairman opposed this investigation of workers' attitudes, since all supervisors were on management's side.... The atmosphere was charged with tension.

"... it was suddenly recognized that there was no representative of supervision on the wages committee, and they decided to remedy this shortcoming before the next meeting."

At the shop committee meeting on 2 March:

"Members expressed far more anxiety than they had dared reveal openly in the wages committee. The management, they feared, was trying to put something over on them, and if output went down, would scrap the whole scheme and put them back on piece-rates. They were uncertain what to do, because the people on the shop floor whom they represented were deeply suspicious of the proposals."

Attitudes on the Shop Floor

At the suggestion of the consultant, the shop committee decided to undertake serious discussions throughout the shop before proceeding further. The 40 piece-workers were divided into five groups of eight, with one shop committee member delegated to each. The group discussions ran smoothly, each session lasting its full hour. The suspicion was aired that the shop committee were in league with management and were just "management stooges and buffers".

Many safeguards and guarantees were asked for; which provided one indication of the state of morale in the shop. It was felt that management "must have something up its sleeve; they must be getting something out of it or they wouldn't have proposed the scheme in the first place". Many workers recalled previous experiences, in particular the way the piece-rate system had been introduced four years before.

On the wages issue, the shop committee was instructed to press for a higher rate than had been offered, to secure a proper distribution of the savings which were

expected to accrue from greater co-operation and lower overheads, and to see that a uniform productivity was introduced into the shop to which the hourly wage could be related. "... the shop committee was asked to secure some kind of guarantee that any agreed rate would be upheld. If another department changed over to hourly wages at a higher rate than that which they obtained, would they be able to re-open negotiations to increase their own rate? Or if they settled for too low a rate, this could be used by higher management to drive hard bargains with other piece-rate departments making a change over.

"Under a flat hourly system supervision might begin to 'push them around, and tie them to their benches'. A trial run of the new system for a period of three months was demanded, with the provision that there would be a minimum of interference from supervision, otherwise the workers would never be allowed sufficient time to get used to the new system and show what they could do when they had settled down. The sick, the elderly, and other categories unable to work so quickly, might find themselves penalized, and how could they ensure that a man would be given satisfactory opportunities to increase his skill and hence his basic rate. Appropriate protection against such eventualities had somehow to be obtained....

"... had management not originally put forward the proposal that the operatives should drop a penny an hour on their existing rates, on the grounds that there was likely to be some drop in production if the piece rate system with its incentives was discontinued? Surely here was proof that management had no confidence whatsoever in them as workers.

"... four years before, they had been promised that if they did not like the new system they could discontinue it. In spite of much criticism at the time, nothing had been done about changing it, and the shop was left feeling the scheme had been forced upon it. As a result they were fearful that the present management would impose the scheme they were now considering even if they did not agree to it.

"... in view of the divisional manager's anxiety on the morning of the group discussions, and management fears generally that workers could not be trusted to keep production up; the shop committee's frequently to be inferred suspicion of management; and the first hot-tempered argument between them all, management, supervisors, and workers alike—it was obvious that much more was going on under the surface than would appear from the placid atmosphere in the Committee."

As a result of group discussions, the shop committee decided to press for the higher wage, and to lower this figure only if no outstanding injustices would be done to individuals currently earning high wages. But general "morale issues, particularly those dealing with the behaviour of supervision and management, were to be held in abeyance for fear that raising them too directly might 'get them all thrown out of the office by management'"

The Interdependence of Methods of Payment and Morale

At the next meeting of the wages committee stalemate was reached. Clearly morale factors had to be taken into account. This was temporarily agreed, and some adjustments in the wages proposal were made. But problems of morale continued to be regarded as "side issues" and remained unsolved:

"... they managed to reach conclusion on the point that small adjustments should be made in the case of those individuals who stood to lose too much.

With this as a kind of successful test-out, one of the shop committee members revealed that the shop floor suspicion that management was trying to 'fiddle' had arisen from the proposal that a penny an hour should be taken off their wages because of possible loss of production. With such frankness as the keynote, the divisional manager replied that he was now satisfied that the shop would maintain production, and was prepared to drop the proposal about the penny deduction."

But: "What would happen to individuals who lost money? Could productivity be maintained with the new types of work coming in? Complaints were made about current rate fixing, and there were problems about individuals whose present basic pay was too low. All these questions, though aired, remained unresolved."

In mid-March certain morale issues became pressing. Another division had opened negotiations to change over to hourly rates—at what rates?—and there were divergent opinions in the shop committee regarding the likely level of productivity after the change-over in the service department. The committee acknowledged the importance of morale issues to the extent of agreeing to take them up after a satisfactory hourly rate had been negotiated and before the change-over was finally settled.

On 30 March, the superintendent and the chairman of the shop committee arranged a joint meeting of all supervisors and members of the shop committee to discuss their differences. Problems of tooling and of timing and assessing piece-rates were the terms in which the strains and stresses of their relations were discussed. The meeting arranged that workers' representatives were to be consulted more closely when prices were fixed, and agreed to convene again.

The next meeting of the wages committee (7 April) was scheduled to last "five or ten minutes—just time to allow the announcement of the calculated rate" by management. In fact it lasted two-and-a-half hours; and, at the end the committee could only agree to hold a ballot in the shop to decide whether or not the workers wished negotiations to proceed on the basis of management's wages proposal. Every piece-worker received a joint statement to this effect, had it personally explained by the superintendent and the chairman of the shop committee, and was invited to raise any difficulties with either or both of them. Six workers asked for, and were given, special increases to avoid a considerable drop in earnings. The ballot (13 May) resulted in a unanimous vote to continue the negotiations for a flat rate.

Taking up the Underlying Morale Problems

Having agreed to negotiate on the basis of management's proposal, "subject to final confirmation by the district trade union officials who had been kept informed of all developments", the wages committee was free to take up general morale issues at its next meeting. This was heated, threw up a wide range of points, and reached a deadlock. At his request, the divisional manager was left to consider in detail the

list of points raised by the shop in the group discussions in March. When copies were circulated to every member of the committee the morale problems were now out in the open.

In the meantime the supervisors and the shop committee continued to meet and discuss differences. In fits and starts their relationship improved and they began to turn their attention in such directions as the application of the principles of joint consultation to the day-to-day running of the department.

Establishing the Shop Council

The wages committee met again just two days after their previous meeting for "what turned into a full day of intensely serious work". Besides raising again the question of productivity, the divisional manager wished to discuss "the establishment of some mechanism for making possible increased participation of the total shop in the making of departmental policy". This expressed a new attitude on the part of departmental management.

"In explaining the origin of this attitude he referred to his realization at the last meeting that the workers felt that departmental management were prone to give way to the demands of other departments. He also referred to a report he had had about the furore caused in the meeting between the supervisors and the shop committee by the plans for rebuilding in the shop. He had not expected that those plans would create so much hostility and resentment, since they had been fully discussed with the people in the store, who after all were the ones mainly concerned. He and his colleagues considered therefore, that if they were seriously to go ahead with joint consultation it would be necessary for them to take supervision and workers more fully into consultation on shop policy."

Since morale issues were now out in the open they could be discussed frankly. Some points on the wages issue were quickly dealt with, but a number of awkward questions remained, e.g. about productivity and the distribution of savings on overheads. The manager felt that the policy-making group he had recommended—a "Shop Council"—could deal with issues such as these. But the workers continued to wonder suspiciously whether management "had anything up their sleeve". And it took further clarification, partly among themselves, for them to agree "to give management a trial . . . if things did not work out, at least they would be no worse off than they were and would know better where they stood".

"They found it difficult, they said, to have confidence in such a plan because of previous experience with management and supervisors, and again referred to the way they considered the 'minutes system' had been imposed four years before, and to the existing discontent about rate fixing."

The chairman of the shop committee, who asked to meet separately with the consultant "to clarify plans to bring before his committee", was clearly in a dilemma. On the one hand, a staunch trade unionist for 30 years, he harboured a strong suspicion of management. On the other, he wished to realize what he

expressed as "his dream to see the workers participate in management", not just for himself but for the younger workers who were now growing up: "My industrial life has been hell, and I don't want to see my children go through the same thing. But it's awfully difficult to take an opportunity like this when you see it, when you've had the kind of experience in industry that I've had in the past." The consultant talked with him for nearly three hours, and gradually he began to clarify his thought and to outline possible ways in which a shop council could be set up and what it could do.

The shop could now be consulted on whether or not they would finally agree to the change-over in payment. Approval for the wages agreement and the setting up of the shop council was secured from the managing director and from the trade union officials. The role of the shop council was further clarified.

The managing director was anxious "lest the service division might be trying to set up its own show separated from the rest of the factory". It was agreed that the council would be responsible for matters which affected the service department alone, and that consultation with the works council would be required wherever other sections of the company would be affected.

Implementing the Wages Change-over

On this basis the ballot was held on 16 June, six-and-a-half months after the manager's definite proposal and 14 months after he had first mooted the idea. Of the 40 piece-workers, 28 voted in favour, and 12 were opposed. The shop committee decided to go ahead with this majority, particularly since the earnings of the department as a whole would increase slightly under the new agreement.

But all doubts were by no means allayed. The shop committee were worried lest management should victimize people who had opposed the scheme and might remain unco-operative for a time. They were not prepared to let the shop council shoulder the responsibility for such a situation. The shop council would establish general policy; it was management's job to carry out this policy. The shop committee asked for and immediately obtained, a written agreement to the effect that nobody would be sacked because he was opposed to the change-over.

The shop committee was to a large extent aware of the real nature of the action and interaction in discussing the changes. Its chairman told the shop that the committee "had tested management very severely, making many criticisms and creating a great many difficulties, partly at least in order to see how management would react. On the whole, he felt that management's attitude had been fair throughout and . . . that there was a reasonable hope of obtaining co-operative working relations between the management and the workers". The shop agreed to give the scheme a fair trial.

This view was immediately severely tested by, and survived, a technical hitch. Much suspicion remained when the new method of payment came into operation on 28 June.

"Having decided on the change-over, the workers requested that it be implemented before the holidays to get the advantage that year of the increased holiday pay they would receive. This the management readily agreed to do, but on checking with the Finance Office on 25 June they were chagrined to discover that unless the change was made before 30 June they would not benefit, since that was the day on which the holiday rates of pay were calculated. And even if they changed before 30 June they would not get the full benefit of the increase, since their coming holiday pay would be the average of the new rate and the rate on 1 July of the previous year. An emergency meeting of the wages committee was called and the management explained the position.

"The attitude of the shop committee was 'Aha! So this is what you've held up your sleeves all the time'. The management, however, was firm and pointed out, as was indeed the case, that the workers were just as responsible as anyone else for knowing about holiday wages regulations. There was then some heated discussion. . . . They decided to send the divisional manager to find out from the managing director whether any special arrangement could be made.

"The difficulty was complex. The foundry had changed over from a group bonus to flat rates earlier that week, and the works director had said they would get their holiday pay on the new rates. He, too, realizing his error, had gone back to the foundry, and the same trouble had arisen there. Hearing about this, the service department decided to sit tight until it saw what the foundry would do.

"The two departments were told by the managing director that they could have the full new rates for the holiday if they felt this was fair. The foundry decided to take it. The service department shop committee vacillated. The superintendent took the shop committee chairman to task for his vacillation, because every hour that went by meant it was becoming increasingly difficult to get the accounts out by 30 June if they should decide to take the new rates. Pushed into a decision the shop committee followed the foundry, and took the full rate because everyone in the shop had expected it, and they wanted to give the new method the best possible start. By a considerable effort the superintendent, the shop accountant and the office staff were able to get the accounts out just in time."

The special efforts of management to overcome the difficulty gave general satisfaction so that "what seemed at first a nasty situation contributed to better departmental morale".

Comment

Four points emerge as of particular interest:

1. The early attempts of the management and the workers' representatives to "stick to the agenda" and confine their discussion to the wages change-over came to nothing. The "side issues" contained the immediate and important problems which had to be tackled *before* the detailed change could be usefully discussed. In other words, it was the relationships—the "atmosphere"—that mattered.
2. There was an intense and prolonged process of "testing-out". "Management took every opportunity to allow the workers to demonstrate how responsibly they were capable of behaving, and. . . the workers in turn did not miss a single occasion to test whether management really intended to be as co-operative and above board as they professed. The fundamental issue was whether mutual confidence could be established."
3. Steps were taken to ensure the participation of the whole depart-

ment. The danger of proceeding with inadequate support was met by broadening the basis of representation on the committees; by holding group discussions and ballots in the shop, and meetings between supervisors and workers' representatives; and by giving special consideration to individual workers.

4. The rest of the factory and the trade unions were involved in the changes and their agreement secured.

The study concludes as follows: "The process of working through the wages problem by recognizing and doing justice to the wholeness of the pattern of attitudes, group relations, administrative practices and technological changes of which the wages question forms an integral part, made it possible for the shop to achieve a double result: they introduced a new method of payment which provided a generally accepted solution to the immediate problem; but more than this, they have set in motion a process which will ensure for them that however the new methods work out, it is likely that they will be able to deal more readily with similar problems in the future by being able to recognize them earlier and by being better equipped to cope with them as they arise."

SUMMARY

Two examples have been quoted at length to illustrate the complex nature of community "maintenance" and community "growth". Perhaps the most significant point—particularly for industrializing communities—that emerges from the studies is that to nurture and maintain an existing sense of community is easier than to recreate this sense once it has been lost.

In setting up a new factory in Minetown (the first example) care was taken to respect and use—in the sound physiological sense of the word "use" meaning "exercise"—the existing community structure, its relationships, its customs, traditions and standards of behaviour. In so doing, the factory not only gained respect and a real place in the community, but also created the true conditions for high output.

It was suggested in Chapter I that, in all observed instances, continuing high "morale" in groups, i.e. a sense of community, was due to persistent effort. In older societies that effort was intuitive, unconscious perhaps of its purpose. Modern civilization seems to give rise to two dangers: (a) that these intuitive skills will be lost or neglected; (b) that intuitive skills may become inappropriate to altered conditions. Specific study of needs and conscious practice of appropriate skills therefore become essential.

Like Minetown, the Glacier study illustrated the application of such skills. But at Glacier the demands on these skills were in some respects of a different kind. At Glacier the social order was not so clearly

defined nor of long standing; and outside the factory there was little sense of community at all. Potentially, a factory that sets up in an established community—and this is happening constantly in industrializing countries—is in an excellent position to make itself a real part of its community and to receive in return the productive rewards of high morale.

With the Minetown and Glacier studies to help focus the large variety of situations treated in Chapter II, it is now possible to reexamine the studies, those in Chapter I included, and from them all seek useful generalizations which will be easily applicable to other situations. This, Chapter IV will attempt to do.

IV. SATISFACTIONS IN INDUSTRY

"In every age of well-marked transition there is the pattern of habitual dumb practice and emotion which is passing, and there is the oncoming of a new complex of habit. Between the two lies a zone of anarchy, either a passing danger or a prolonged welter involving misery of decay and zest of young life."

A. N. Whitehead [1]

Industry cannot alone reintegrate society. That is a task facing all major social institutions jointly—family, school, local government, church, and others besides factory, office and shop. Until it is successfully tackled, "anarchy" will be prolonged and the problems of social disruption will affect industry whatever is done within its walls. But the process can be set in motion in industry. Indeed, it may be better started there than in any other institution, for people assemble more regularly for work than for any other purpose. And industry itself is likely to profit directly as well as indirectly.

We can certainly conclude from the studies reviewed in the last two chapters that industry can exercise an important influence on the two basic problems of industrial society: it can take care to preserve and strengthen existing communities; and it can often be the starting point for a new community. The question of this chapter is: How important is this influence? Is it sound in the long term? Is it really changing basic trends, or does it merely retard them? Are the organizations studied perhaps only successful in a strictly relative sense—not as bad as others, but fundamentally much the same? In short, can industry provide real community satisfactions? To try and answer this doubt is the first object of this chapter. We shall then draw out from the studies the features peculiar to effective social institutions.

[1] *Adventures of Ideas*, 1933, New York, Macmillan, p. 8.

The Nature of Community Satisfactions

The first point to note is the similarity of satisfactory relations in industry to relationships outside which are known to yield community satisfactions. There are here the same close ties, common interests, squabbles, habitual co-operation, experience shared outside and inside the works. There are many detailed examples of this in the now classic Hawthorne studies, which were particularly concerned with describing the social life in a large organization. They leave little room for doubting the quality of social life possible in industry. On the positive side it is clear, for instance, that social life in industry can satisfy needs common to all men: response from a group of which they feel real membership; a feeling of importance; prestige; a leader; close friends; ways to work off frustrations. The negative side is perhaps even more clear: social life in industry can reduce the incidence of maladjustments due to the lack of community satisfactions.

To take just one personal example from the studies carried out for inclusion in this volume, the following relates to the background of one of the local instructresses mentioned on page 92. She was 25 years old, nervous when she came and saddled with a marked feeling of inferiority. Within six weeks "she had overcome occasional set-backs, gained confidence, and exerted a good influence on her group", and was appointed instructress with the agreement of all. Later she looked after the factory when the manager had to be away. Yet "she lived in an old two-roomed cottage that was flooded regularly three times every year. Her parents had died in rapid succession soon after she had returned from service in the ATS. Her brother had one eye, was deaf, but was at work. She herself had been working as a domestic for 25 shillings a week. She had not been immediately successful, felt that she would never be able to do the job, and blamed her eyes."

Social Processes

The similarity extends to the *processes* of social life. In industry, as elsewhere, community satisfactions depend on attitudes, habits and norms which have been developed within a social structure. Usually these attitudes are taken for granted. But when they are queried, violated or threatened, social sanctions are automatically applied in their defence.

The following passages are taken from the Hawthorne studies and describe norms and sanctions in the Bank Wiring Observation Room and the structure within which they operated:

". . . this group of operators held certain definite ideas as to the way in which an individual should conduct himself. These sentiments which were connected chiefly with occupation, output, and supervision, may be summarized as follows:

"(1) You should not turn out too much work. If you do, you are a 'rate-buster'.

"(2) You should not turn out too little work. If you do you are a 'chiseller'.

"(3) You should not tell a supervisor anything that will react to the detriment of an associate. If you do, you are 'squealer'.

"(4) You should not attempt to maintain social distance or act officious. If you are an inspector, for example, you should not act like one.

". . . the individual's position in the group was in large part determined by the extent to which his behaviour was in accord with these sentiments. . . .

"The mechanisms by which internal control was exercised were varied. Perhaps the most important were sarcasm, 'binging' (sharp punches in the upper arm) and ridicule. Through such devices pressure was brought to bear upon those individuals who deviated too much from the group's norm of acceptable conduct. . . . They were in a sense, socially ostracized." [1]

". . . helping one another . . . was done a good deal when technically there was no justification for it. The wiremen said that it made them feel good to be helped. Their attitude is best expressed in the following excerpt from an interview with Worker W. 4. . . ."

Int.:[2] "You do move around quite a bit, do you? Then you don't always work on your own equipment?"

W. 4: ". . . once in a while if a fellow gets behind someone will go over and help him out."

Int.: "Do they do that for anyone who is behind?"

W. 4: "No. You know, it's a funny thing about that gang. It seems like if a fellow is loafing and gets behind, nobody will help him out, but if he is making an honest effort he will be helped. I've seen that happen time and again. Somebody who has been working along hard all day and has had a lot of tough luck will be helped out."

Int.: "Do you find that certain people help certain other people all the time, or do they change around quite a bit?"

W. 4: "Well, some people are friendlier than others, you know, and where that's the case you will find them helping each other out. Once in a while a fellow will get behind who ordinarily is a good worker. That sometimes happens to anyone. I know one fellow down there who did that and two other fellows went over and started helping him out. That was around a quarter to four. They had their job done and thought they would give him a hand. He didn't say anything, he let them go ahead and help him out, but you know he never helps anyone else out. Since then he has never given a hand to anybody. Do you think they would help him out again? No sir! They're off of him. They don't like a guy that does that. I think it's a good idea to help a fellow out once in a while. I know I appreciate it. It makes all the difference in the world. It's a funny thing, I'll be working along and be behind and I'll feel all fagged out. Then somebody comes over and starts in wiring on my equipment with me, and you know I perk up to beat the band. I don't know; it just seems to put new life in you, no matter if he only helps you for a couple of levels. I can pick up and work like the deuce then up till quitting time."[3]

". . . The operators attempted to protect themselves from outside interference by bringing into line those outsiders, supervisors and inspectors, who were in a position to interfere in their affairs . . . nearly all the activities of this group may be looked upon as methods of controlling the behaviour of its members. The men had elaborated, spontaneously and quite unconsciously, an intricate social organization around their collective beliefs and sentiments.[4]

[1] Roethlisberger & Dickson, *Management and the Worker*, 1942, Cambridge, Massachusetts, Harvard University Press, pp. 522—3.

[2] Interviewer.

[3] Ibid., pp. 505—6.

[4] Ibid., pp. 523—4.

"The position of wiremen was regarded in the department as somewhat superior to that of soldermen. . . . One of the most frequent ways in which the wiremen demonstrated their superior standing was in job trading . . . in practically every case the request for trading originated with a wireman and the solderman almost always traded without protest. . . ." [1]

Social Structure

The basic units of social structure are the small working groups. It is their systems of values and behaviour that carry most weight with their members. These groups interact and form larger structures which, all together, cover the whole organization and much of its social environment.

"All the patterns of interaction that arise between individuals or between different groups can be graded according to the degree of intimacy involved in the relationship. Grades of intimacy or understanding can be arranged on a scale and expressed in terms of 'social distance'. Social distance measures differences of sentiment and interest which separate individuals or groups from one another. Between the president of a company and the elevator operator there is considerable social distance, more for example than between the foreman and the benchworker. Social distance is to social organization what physical distance is to physical space. However, physical and social distance do not necessarily coincide. Two people may be physically near but socially distant.[2]

" . . . the members of an industrial plant—executives, technical specialists, supervisors, factory workers, and office workers—are interacting daily with one another, and from their associations certain patterns of relations are formed among them. These patterns of relations, together with the objects which symbolize them, constitute the social organization of the industrial enterprise. Most of the individuals who live among these patterns come to accept them as obvious and necessary truths and to react as they dictate. Both the kind of behaviour that is expected of a person and the kind of behaviour he can expect from others are prescribed by these patterns.

"If one looks at a factory situation, for example, one finds individuals and groups of individuals who are associated at work acting in certain accepted and prescribed ways toward one another. There is not complete homogeneity of behaviour between individuals or between one group of individuals and another, but rather there are differences of behaviour expressing differences in social relationship. Some relationships fall into routine patterns, such as the relationship between superior and subordinate or between office worker and shop worker. Individuals conscious of their membership in certain groups are reacting in certain accepted ways to other individuals representing other groups. Behaviour varies according to the stereotyped conceptions of relationship. The worker, for example, behaves towards his foreman in one way, toward his first-line supervisor in another way and toward his fellow worker in still another. People holding the rank of inspector expect a certain kind of behaviour from the operators—the operators from the inspectors. Now these relationships, as is well known from everyday experiences, are finely shaded and sometimes become complicated. When a person is in the presence of his supervisor alone he usually acts differently from the way he acts when his supervisor's supervisor is also present. Likewise, his supervisor acts towards him alone quite differently from the way he behaves when his own supervisor is also there. These subtle nuances of relationship are so much a part of everyday life that they are commonplace. They are taken for granted. The vast

[1] Ibid., pp. 456—7.
[2] Ibid., p. 556.

amount of social conditioning that has taken place by means of which a person manoeuvres himself gracefully through the intricacies of these finely shaded social distinctions is seldom explicitly realized. Attention is paid only when a new social situation arises where the past social training of the person prevents him from making the necessary delicate interpretations of a given social signal and hence brings forth the 'socially wrong' response.

"In the factory as in any social milieu, a process of social evaluation is constantly at work. From this process distinctions of 'good' and 'bad', 'inferior' and 'superior', arise. This process of evaluation is carried on with simple and ready generalizations by means of which values become attached to individuals and to groups performing certain tasks and operations. It assigns to a group of individuals performing such and such a task a particular rank in the established prestige scale. Each work group becomes a carrier of social values. In industry with its extreme diversity of occupations there are a number of such groupings. Any noticeable similarity or difference, not only in occupation but also in age, sex and nationality, can serve as a basis of social classification, as, for example, 'married women', the 'old-timer', the 'white-collared' or clerical worker, the 'foreign element'. Each of these groups, too, has its own value system."[1]

These values are expressed in systems of ideas and beliefs. "Some of those systems of ideas and beliefs represent what the organization should be; that is, what the relations of people to one another should be or how people should behave. Some express the values of one part of the total organization, for each specialist tends to see the total organization from the point of view of the logic of his own speciality. Still others express the values residing in the interhuman relations of the different social groups involved."[2]

"From this point of view it can be seen how every item and event of the industrial environment becomes an object of a system of sentiments. According to this way of looking at things, material goods, physical events, wages, hours of work, etc., cannot be treated as things in themselves. Instead they have to be interpreted as carriers of social value. The meanings which any person in an industrial organization assigns to the events and objects in his environment are often determined by the social situation in which the events and objects occur. The significance to an employee of a double-pedestal desk of a particular kind of pencil, or of a hand-set telephone is determined by the social setting in which these objects appear. If people with double-pedestal desks, supervise people with single-pedestal desks, then double-pedestal desks become symbols of status or prestige in the organization. As patterns of behaviour become crystallized, every object in the environment tends to take on a particular social significance."[3]

"... each employee ... has a particular social place in the total social organization. But this place is not so rigidly fixed as in a caste system. In any factory there is considerable mobility or movement. Movement can occur in two ways: the individual may pass from one occupation to another occupation higher up in the prestige scale; or the prestige scale itself may change.

"... these scales of value are never completely accepted by all the groups in the social environment. The shop worker does not quite see why the office worker, for example, should have shorter hours of work than he has. Or the newcomer, whose efficiency on a particular job is about the same, but whose hourly rate is less than that of some old-timer, wonders why service should count so much. The management group, in turn, from the security of its social elevation, does not often understand what 'all the fuss is about'."[4] Nevertheless, at Hawthorne the general structure was fairly coherent.

"A large number of integrating factors were to be found in the activities sponsored by the Hawthorne Club. This Club, whose membership comprised every

[1] Ibid., pp. 554—6.
[2] Ibid., p. 562.
[3] Ibid., p. 557.
[4] Ibid., p. 556.

employee and which was run by the employees themselves, engaged in a wide variety of activities. It sponsored eight different clubs, with regularly elected officers, and 12 kinds of athletics, in addition to informal parties, dances, and entertainment programmes. These activities interested a large number of employees of all ranks and served to create personal relations of great variety and endurance outside of the immediate work situation. . . .

"Another important integrating factor was service or seniority. It is the one basis upon which men are differentiated by an impartial process free from human contrivance or feelings of prejudice. In this one respect, if in no other, every employee has something in common with his superiors. That seniority was recognized as an important factor in the social organization of the company is seen by the importance attached to it by the employees and by the number of social rituals and privileges organized around it. Important service anniversaries were celebrated by dinners and parties given by friends, by 'write-ups' and pictures in the 'Microphone', by public congratulations from some one in high authority, and by the conferring of certificates or buttons symbolic of the 'age' attained.

"Another group of important integrating factors included the thrift programme, sickness, accident, and death benefit funds, pension funds, hospital care, financial and legal service, and so on. These activities were begun by the company through necessity and may be looked upon as the taking over by the company of social functions not adequately performed by society. They reflect, in some measure, the breakdown of the social milieu in a concentrated industrial population. The effect upon the industrial establishment is to make it an important source of stability. It becomes a highly complex and comprehensive social institution. The employees find within the company itself not only a source of income but also, and to a marked extent, a source of advice, friendship, and aid as well as a source of amusement and recreation."[1]

Community satisfactions in industry are therefore real. They are similar in nature and develop by similar processes and through similar social structures as community satisfactions elsewhere. Indeed they are not distinct but form part of the satisfactions, processes and structures that encompass people's whole lives.

"INSUPERABLE" OBSTACLES TO COMMUNITY SATISFACTIONS IN INDUSTRY

The variety of efficient organizations studied in this volume—large, small; old, new; skilled, unskilled; manufacture, extraction, distribution; diverse social environments—precludes the possibility that they are peculiarly favoured by outside circumstances. What then accounts for their efficiency? In what respects are they similar? They have, among them, all but one of the features which are commonly held to make it impossible for industry to yield community satisfactions: limited use of skills; "faulty" systems of payment; frequent technical change; advanced specialization; great size. The obstacles deserve brief discussion before we return to the one feature the organizations have in common. The problems we have mentioned are not, to be sure, phantom problems. They are very real. But they are clearly not insoluble.

[1] Ibid., pp. 540—2.

Skill and Monotony

For instance, the infinite care that is focused on taking the human element out of machine production is certainly productive of problems. Lord Lindsay of Birker, told by some mining machinery manufacturers that they were trying to make machines "so that any fool could handle them", replied that that was "a damnable goal".[1] The range of application of skill is often very narrow, requiring great imagination on the part of the worker to visualize the finished product to which he contributes, and a great act of will to feel any sense of pride in the product and in participating in its making. Such conditions do not conduce to community satisfactions. But their effect can be over-rated, or at least misunderstood. Machinery is not foolproof. The operation of mining machines underground depends on considerably more than a fool's intelligence, and even such a repetitive job as packing chocolates requires a great deal of skill to be done at a fair speed. Monotony is not a quality of certain kinds of work. It is a general sensation, and results from the impact on the individual of the whole work situation, of which the physical nature of the work is only a part. After several months' study of a Scottish engineering factory of 400 employees, Mr. John Mack concluded that the problem was basically not one of too much monotony but one of too much uncertainty—uncertainty as to what job would have to be done next, what earnings it would yield, what people would be work associates. This uncertainty inhibited human contact.

Rapid Technical Changes

These are a frequent source of difficulty. They "make for changes in the worker's job and through the job may have profound consequences for the employee. For in so far as his job is changed, his position in the social organization, his interpersonal relations, his traditions of craftmanship, and his social codes which regulate his relations to other people may also be affected. Secondly, the worker must frequently accommodate himself to changes which he does not initiate".[2] But it is possible to take the social implications of change into account. Indeed, all the organizations studied in this book have dealt with changes of great magnitude and diversity.

Incentives

The organizations studied seem also to have found ways to overcome the "problem of incentives". It is claimed that incentives in modern industry are not adequate in themselves, nor adequately varied. This

[1] Address at 54th Oxford Management Conference, Harrogate, November 1949, British Institute of Management.

[2] Roethlisberger and Dickson, op. cit., p. 546.

conception is usually limited to economic incentives. If "social" incentives are included at all, they are often regarded as something bestowed on the workers, "laid on" for them, as it were, to be accepted or not, according to choice. As Sabine points out, "when these incentives wear out, the index of their failure is an increase of frustration . . . (with) the possibilities of frustration increasing as the possibilities of achievement are increased. An upswing of the amount of coercion . . . is needed to keep the system going . . . and coercion is a blunt instrument for producing any but the crudest social results".[1] The "social" or "emotional" incentives can doubtless be just as frustrating as economic incentives. But this is so only where the basis of healthy competition, namely co-operation, has not yet developed. Laurel wreaths and blue ribbons have value only in a real community.

Specialization and Size

The high degree of specialization and the increasing size of industrial organizations raise problems of a different stature. Great size and specialization threaten maladjustment, if not within the works, then in the social environment. But these problems are common to all communities, and need not be insurmountable.

Mr. George C. Homans notes this about modern books on industrial organization "with their elaborate arguments about 'line', 'function' and 'staff'. As a matter of fact, the phenomena they talk about appear in all societies. For some collaborative purposes, only small organizations are necessary, for instance, families. For others, much larger ones are required, for instance, manors. Again any large organization is made up of several smaller institutions, each with its special function. Even in a medieval village, where the specialization on the whole was not elaborate, there were persons who performed special functions: the smith, the hayward, the priest, to say nothing of the division of functions between men and women. The history of mankind has been a history of increased specialization and the specialization has been more and more a matter of organization. Whereas a primitive tribe will, in effect, resolve itself from time to time into a religious congregation or into a court, but have no specialized religious or legal institutions, a more advanced society will have a permanent priesthood, judiciary, and police. This point is the one which is important here, since each such specialization entails a further complication of the scheme of communication."[2]

Self-interest First

Besides these problems there is finally the notion of "the automatism of individual self-interests". It is a rationalization that stems straight from the "economic man" and is closely akin to the limited conception of "incentives". It still presents a problem in so far as it confuses the diagnosis of industrial problems and bedevils their solution. As Mayo

[1] Sabine, George H., "Beyond Ideology", in *The Philosophical Review*, January 1948, p. 22.
[2] Homans, G. C., *English Villagers of the Thirteenth Century*, 1942, Cambridge, Massachusetts, Harvard University Press, p. 410.

suggests, "in every instance of which we have first-hand knowledge, there is clear evidence that the usual ideas and practices in industry are based on a general misconception of the nature of the problem and consequently on a misconception also of the nature of effective remedy".[1] Not even the famous "free market" was "an exclusively economic institution. Actually, it was the central *social* institution of the nineteenth century".[2] Economic interests would seem to be best served by attending to community satisfactions.

Mr. Walter H. Wheeler Jr., president of Pitney-Bowes, Inc., notes that, as an idea for helping the people in the organization to develop "is passed on through the executive heads to the board of directors and to the stockholders, practically everyone who reacts inwardly and emotionally in favour of it is infinitely relieved when the rationalization to the profit motive comes along—when it can be reconciled with the folklore of capitalism. . . ." [3]

The following is "the market" as Mr. P. Drucker experienced it: "As late as the early and middle thirties—when I myself worked in the City of London in the supposedly 'freest' of all businesses, international banking—the old mercantile government of the market was still functioning. Though it had lost considerably and was only a shadow of what it had been 25 or 50 years before, it was still an extremely powerful, immediate, and ruthless rule. Nobody in mercantile business —banker, stockbroker, wholesaler or insurance broker—could afford to disregard it. To brush aside an order from the duly constituted authorities of the market meant rapid punishment. Permanent and wilful contravention of these orders or of the codes administered by the rulers was impossible, even for the financial or commercial giants. The penalty would have been the destruction of the business of the offender. Execution of such an economic death sentence pronounced by the rulers would have been swift, merciless, and unappealable.

"The market rulers exercised their powers through the typical institutions of the market: the central bank, the stock exchange, the money market, the commodity exchanges, the foreign exchange market, the freight exchange, etc. They ruled in the interest of the market; that is, for the political purpose of keeping the mercantile society functioning. It was the badge of statesmanship in the market to be known for putting the functioning of the market above one's own economic interests. It corresponded to the prestige which placing the interest of one's country above one's own political advancement gives in the political system. Finally, the coercion of the market government was exercised through the power of the rulers to grant or to deny access to, and membership in, the market. If, for instance, the Bank of England—the most powerful and most typical of all the mercantile rulers—wanted foreign exchange speculation to be curtailed, it did not issue an ordinance. That would have been quite contrary to the constitution of a market. It simply passed the word along. Apparently informally the hint was conveyed—over the lunch table, in a chat over the telephone, on the Stock Exchange, or through the Foreign Exchange brokers. Nobody, at least not until the whole market structure began to disintegrate after the last war, was formally requested to cut down his dealings in foreign exchange. The offender was neither hauled into court nor fined. If he disregarded the hint—followed up perhaps, with an equally discreet warning—he would suddenly find his credit curtailed or stopped; his 'name' would cease to be 'good delivery' on the Stock Exchange, his endorsement on a bill of exchange would no longer be accepted as 'bankable signature' on the money market. His physical person would remain untouched. But the social

[1] Mayo, *The Social Problems of an Industrial Civilization*, pp. 110—11.
[2] Drucker, P., *The Future of Industrial Man*, 1942, New York, John Day, pp. 54—5.
[3] From an address to the Society for the Advancement of Management.

rights to which his individual property entitled him—namely, the access to, and the equal membership in, the market—would be withdrawn".[1]

Problems of repetitive work, incentives, technical change, organization and self-interest conflicting with common interest need not therefore prevent community satisfactions in industry.

A COMMON FEATURE: CLOSE HUMAN ASSOCIATION

The essential feature that all the organizations studied in Chapter II have in common is that, in a variety of ways, they encourage intimate human association at work. Physical conditions are so arranged that small numbers of people work closely together and can easily communicate with each other. And they stay together sufficiently long to form attitudes, habits and norms in common; which makes each member feel that he belongs. The importance of this has been increasingly emphasized over a number of years. Without the security that comes from the feeling of belonging to a group, the individual is liable to become unadaptable, resentful and socially ill. This is a basic fact that needs stress now where it did not before; it could be taken for granted until it gave rise to serious difficulties. The stress on the need for intimate human association probably arises not so much from the importance of the matter as from the growth of conditions which increasingly interfere with close human association of which the high rate of social mobility is probably the most important, and the physical organization of work the second.

But emphasis on close human association does not in fact take us very far. It differentiates organizations which provide community satisfactions from those, such as the Southern Californian aircraft factories, in which there is self-perpetuating social upheaval. But it does not alone differentiate socially efficient organizations from the inefficient. Given enough time together, people associate for good *or* ill: their attitudes, habits and norms may or may not agree with the aims of the organization or with the values acknowledged in the social environment.

The Hawthorne studies provide most interesting contrasts between what management would term "good" and "bad" groups, living side by side in the same works—one in the Relay Assembly Test Room, the other in the Bank Wiring Observation Room:

"These two studies offered an interesting contrast between two informal working groups; one situation could be characterized in almost completely opposite terms from the other. In the Relay Assembly Test Room, on the one hand, the five operators changed continuously in their rate of output up and down over the duration of the test, and yet in a curious fashion their variations in output were insensitive to many significant changes introduced during the experiment. On the

[1] Drucker, op. cit., pp. 63—5.

other hand, in the Bank Wiring Observation Room output was being held relatively constant and there existed a hypersensitivity to change on the part of the worker—in fact, what could almost be described as an organized opposition to it . . . the informal organization in one room was quite different from that in the other room. . . . In the case of the Relay Assembly Test Room there was a group, or informal organization, which could be characterized as a network of personal relations which had been developed in and through a particular way of working together; it was an organization which not only satisfied the wishes of its members but also worked in harmony with the aims of management. In the case of the Bank Wiring Observation Room there was an informal organization which could be characterized better as a set of practices and beliefs which its members had in common—practices and beliefs which at many points worked against the economic purposes of the company. . . . Or to put it another way, collaboration in the Relay Assembly Test Room was at a much higher level than in the Bank Wiring Observation Room.

"The difference between these two groups can be understood only by comparing the functions which their informal organizations performed for their members. The chief function of the informal group in the Bank Wiring Observation Room was to resist changes in their established routines of work or personal interrelations. This resistance to change, however, was not the chief function of the informal group in the Relay Assembly Test Room."[1]

FEATURES PECULIAR TO EFFICIENT SOCIAL INSTITUTIONS

It is still usual for conditions in industry to permit close human association. Yet increasingly frequently they do not yield community satisfactions. Increasingly people do not feel a sense of belonging in industry. The workers of Yankee City still associated closely in the early 1930's; but they associated most closely to strike.

On the other hand, we have described some organizations which are effective social institutions. There people associate closely in pursuing common aims by agreed methods. We are then back at our old question after an other process of distillation. We are now only concerned with the organizations that provide close human associations. (The others stand no chance until they do.) These organizations fall into two categories: those that are and those that are not effective social institutions. What features distinguish the one set from the other? What features foster the growth of community satisfactions, a sense of belonging?

Autonomy and Responsibility

We may refer again briefly to the Hawthorne studies for a comparison of the conditions in which one group—in the Relay Assembly Test Room—found community satisfactions and the conditions in which another group—the Bank Wiring Observation Room—failed to find them. One difference lay in the degree of autonomy enjoyed by the groups. There was far less interference with the workers in the Relay

[1] Roethlisberger and Dickson, op. cit., pp. 560—1.

Assembly Room than with the workers in the Observation Room. An autonomous group spontaneously develops a social organization, whereas the other's attempts to do so are continually frustrated.

"In setting up the Relay Assembly Test Room with the object of studying the factors determining the efficiency of the worker, many of the methods and rules by means of which management tends to promote and maintain efficiency—the 'bogey' of not talking too much at work, etc.—were, in effect, abrogated . . . a new type of spontaneous social organization developed. Social conditions had been established which allowed the operators to develop their own values and objectives. The experimental conditions allowed the operators to develop openly social codes at work and these codes, unhampered by interference, gave a sustained meaning to their work. It was as if the experimenters had acted as a buffer for the operators and held their work situation steady while they developed a new type of social organization." [1]

In the Bank Wiring Observation Room, on the other hand, a number of important group activities remained not merely unrecognized but contrary to rules and regulations. For instance, "job-trading" and helping out, whereby wiremen and soldermen occasionally did each others' job, were forbidden in the cause of the supposed benefits of rigid specialization.

The function of supervisors differs according to these circumstances. The supervisor of the autonomous group is likely to be concerned with being available when needed to help things along and with facilitating activities with which the group is broadly in agreement. The other is liable to be torn by conflicting considerations: he is expected by management to enforce rules; but to enforce the rules is not necessarily consonant with securing the co-operation of the group. Often a supervisor in the latter type of situation seeks to escape this conflict by allowing rules to be broken or by concentrating on the technical aspects of his task. Further, workers often decline to be promoted to supervisor under such conditions, so that the supervisor may not be the effective group leader.

The Survey Research Centre at the University of Michigan has compared the activities which groups with "high morale" and groups with "low morale" attributed to their supervisors. Supervisors of high morale groups are thought of as being significantly more concerned than supervisors of low morale groups with matters of human relations.[2]

Other studies have compared the behaviour of groups subjected by their formally designated leader to continuous, comprehensive and detailed control with the behaviour of groups whose leader regarded it as his main function to help members to form and exert their wishes as a unit. Lewin called the relationship between the former leader and his group "autocratic", and the relationship of the latter group and its leader "democratic". The following are some of the findings of experiments involving numerous groups in several different situations:

"(1) Expressions of hostility were about 30 times as high in the autocratic groups as in the democratic groups. (2) Tension, reflected in the total volume of social interaction, was 55 per cent greater in the autocratic groups. (3) The autocratic groups showed more dominative and less objective behaviour, particularly

[1] Roethlisberger and Dickson, op. cit., p. 561.
[2] Cf. "Productivity, Supervision and Employee Morale", "*Human Relations*" Series I, Report 1, November 1948.

The statement that the supervisor	*Was made in high morale groups by per cent*	*Was made in low morale groups by per cent*	*Difference*
Arranges the work and makes work assignments	67	69	— 2
Enforces the rules	54	54	0
Keeps the men supplied with material and tools	36	41	— 5
Makes recommendations for promotions, transfers and pay increases	61	22	+ 39
Keeps men informed of what is happening in the company	47	11	+ 36
Keeps the men posted on how well they are doing	47	12	+ 35
Hears complaints and grievances	65	32	+ 33

in relation to out-groups where it was 102 per cent greater than the democratic groups. (4) Much of the aggression in the autocratic groups was directed against two successive scapegoats; none of it was directed toward the autocratic leader. (5) The democratic showed 47 per cent more feeling of 'we-ness' as expressed in language and test situations; the autocratic groups 27 per cent more feeling of 'I-ness'. (6) Along with this the democratic groups showed more co-operative endeavour; more often co-operation was offered or asked for and there were many more occurrences of praise and expressions of friendliness. (7) There was more expression of an objective, matter-of-fact attitude in the democratic groups, as against more personal feelings in the autocratic groups; many more constructive suggestions were offered in democracy and there was more give-and-take of objective criticism without personal involvement. (8) The constructiveness was higher in the democratic groups as shown in the superiority of the group products. In test periods when the experimenter left the room, typically, the constructiveness of work in the autocratic group fell down very quickly, whereas in the democratic situations work went on with very little change. (9) Feeling for group property and group goals was much better developed in the democratic groups." [1]

We may conclude, with Sabine, that the essential difference between the two types of situation is "inadequately described in terms only of individual liberty. It can be much more adequately described in terms of the autonomous or semi-autonomous groupings that the organization permits, in which individuals engage in activities that they feel to be interesting and significant, in which they are subjected to the discipline and training that membership in such groups entails, and in which, so to speak, the group itself creates its own authority and enforces its own standards".[2]

[1] Hendry, C. E., "The Dynamics of Leadership in Social Work Administration", National Conference of Social Work, 1946, p. 9.
[2] Sabine, George H., "Beyond Ideology", *The Philosophical Review*, January 1948, p. 11.

Participation and Adaptation

A second feature which distinguishes the group that finds community satisfactions from the group that fails to do so lies in the greater influence which the former exerts on the initiation and execution of change. The group's sentiments are taken into account, and it is consulted about proposed changes and methods of effecting them. The emphasis is on the group's participation. This kind of group is less resistant to change and adapts more easily than the other.

The importance of securing the group's participation is most strikingly illustrated in a study reported by Lester Kock and John R. P. French. The company traditionally enjoyed good labour relations. Yet despite this, resistance of production workers to necessary changes presented one of the most serious production problems facing the company. This resistance showed itself in numerous ways, such as grievances about piece-rates, high labour turnover, very low efficiency, restriction of output and considerable antagonism to management. An analysis of the performance of several hundreds of operators of similar standards showed that after change, only 38 per cent ever recovered their previous standard of output. The other 62 per cent either became chronically sub-standard or left altogether during their relearning period.

The first experiment took place with four groups matched as well as it is possible to match groups of industrial workers. The first group was asked to participate through elected representatives in working out the change. Groups 2 and 3 participated wholly; all workers took part. Group 4 was the control group which proceeded in the traditional way. The findings briefly were these. The important factor was the degree of participation in the making of the decision. For instance, labour turnover and absenteeism was highest in the control group, which had not participated at all, and lowest in the groups whose members had all taken part. In terms of production, the control group never recovered its standard of output within the 30 days that management allowed the members to stay together at this low level of production; they were then dispersed. The workers who had participated through representatives recovered their former speed in two weeks. And those who had participated altogether recovered their former speed in a few days and, within a month, produced at a rate 15 per cent higher than they had ever done before.

Two-and-a-half months later an opportunity occurred to bring together the 13 remaining members of the control group for a second experiment. This consisted of getting them to participate wholly in another change which was comparable to the first. This time the group speedily recovered and then excelled their previous performance, just like the groups that had participated in the first experiment. The social scientists concluded that it was possible for management to modify greatly or to remove completely group resistance to changes in methods of work and the ensuing difficulties.[1]

The two Hawthorne groups were very differently placed as regards attention paid to their sentiments, to consultation and participation: In the Relay Assembly Test Room the group "developed a new attitude toward changes in their working environment. Toward many changes which constitute an unspecified threat in the regular work situation the operators became immune. What the Relay Assembly Test Room experiment showed was that when innovations are introduced carefully and with regard to the actual sentiments of the workers, the workers are likely to develop a spontaneous type of informal organization which will not only express more adequately their own values and significances but also is more likely

[1] Koch, Lester and French, John R. P., "Overcoming Resistance to Change", "*Human Relations*", Vol. I., No. 4, p. 512.

to be in harmony with the aims of management".[1] In the Bank Wiring Observation Room, the workers' sentiments of personal integrity as members of a social organization were inadequately taken into account in introducing changes. People who suggested changes (for instance, in the methods of work) thus became unwittingly a source of interference and constraint, and resistance to change was "the chief external function of the bank wiremen's informal organization".[2]

In these fundamentally different conditions, groups attach different meanings to change; and this explains their reactions, which at first sight often fail to make sense. In socially effective organizations the conditions are taken into account by management, and policy is sufficiently general and flexible to be adjusted to the needs of each situation.

As Roethlisberger and Dickson point out, the management at the Hawthorne Works could draw contradictory conclusions from the behaviour of the two groups.

"From the Relay Assembly Test Room experiment they could argue that the company can do almost anything it wants in the nature of technical changes without any perceptible effect on the output of the workers. From the Bank Wiring Observation Room they could argue equally convincingly that the company can introduce hardly any changes without meeting a pronounced opposition to them from the workers. To make this dilemma even more striking, it is only necessary to recall that the sensitivity to change in the one case occurred in the room where no experimental changes had been introduced, whereas the insensitivity to change in the other case occurred in the room where the operators had been submitted to considerable experimentation. To settle this question by saying that in one case the situation was typical and in the other case atypical of ordinary shop conditions would be to beg the question, for the essential difference between the two situations would again be missed. It would ignore the social setting in which the changes occurred and the meaning which the workers themselves assigned to the changes." [3]

In organizations whose members have a sense of belonging, real responsibility is shared throughout. When people talk of joint responsibility they are too often concerned "with denial of autocratic authority: too little with the means of establishing that kind of sense of community which makes for responsible participation, for sharing, not denying authority".[4] Joint responsibility does not eliminate tensions and personal difficulties: it provides the conditions in which they can be faced and resolved. As a result it is possible for the individual to adapt effectively to necessary changes and to partake of the freedom which Bertrand Russell regards as the greatest freedom of all: "to be critical of the tribal customs and tribal beliefs that are generally accepted among his neighbours".[5]

[1] Roethlisberger and Dickson, op. cit., pp. 561—2.
[2] Ibid., p. 547.
[3] Ibid., p. 560.
[4] Sabine, op. cit.
[5] B. Russell, "The Individual and Social Ethics", *The Listener*, 3 February 1949, p. 179.

Informal and Formal Structure

We have already noted that groups have distinct attitudes, habits and norms, or structures, even though they work in the same organization. The group on work-bench A is different not merely from groups of technical specialists, clerks, and labourers, but different also from the group on work-bench B. Association within the framework of an organization does not make groups identical, just as the closer association of individuals in a group does not lead to the loss of a member's identity. And just as individuals develop their personality in co-operation with other individuals, they develop it further through co-operating, in their groups, with other groups within an organization. What distinguishes socially efficient organizations from others is that in the efficient this diversity is taken into account. Their formal structure and methods of operation are so arranged that autonomous development of primary groups facilitates communication between groups and maintains and fosters agreement and co-operation throughout the organization. The general function of formal arrangements should be to sustain generally agreed and changing structures of relationships and procedures between groups—an important but limited function. It is suggestive that most of the organizations instanced in this volume regard their formal structures as too complex and flexible to be put down usefully on a chart or, alternatively, take great pains to explain the limitations of formal arrangements. Roethlisberger and Dickson comment as follows:

"In the formal organization of most companies little explicit recognition is given to many social distinctions residing in the social organization. The blueprint plans of a company show the functional relations between working units, but they do not express the distinctions of social distance, movement or equilibrium previously described. The hierarchy of prestige values which tends to make the work of men more important than the work of women, the work of clerks more important than work at the bench, has little representation in the formal organization, nor does a blueprint plan ordinarily show the primary groups, that is, those groups enjoying daily face-to-face relations. Logical lines of horizontal and vertical co-ordination of functions replace the actually existing patterns of interaction between people in different social places. The formal organization cannot take account of the sentiments and values residing in the social organization by means of which individuals or groups of individuals are informally differentiated, ordered, and integrated. . . . Without them, formal organization could not survive for long. Formal and informal organization are interdependent aspects of social interaction." [1]

The important consideration is the relation between the formal and the informal arrangements. In efficient organizations they correspond closely: the formal structures and procedures reflect and sustain the informal, and the primary groups are integrated in an effective social institution. In other organizations the formal and informal arrangements diverge, and failure to co-operate tends to result. For when there

[1] Roethlisberger and Dickson, op. cit., pp. 559—60, 562.

is such divergence, formal arrangements will often be ineffective; and, inadequately recognized in the organization's formal structure and procedures, the primary groups tend to be non-co-operative. They are in fact not integrated; and the organization is to that extent dismembered.

Relations with the Social Environment

Before and after working hours the members of an industrial organization are family fathers, friends, club members, customers, property owners, voters. They have their roots in society outside the factories, offices and shops. They, as it were, carry the social environment into their working groups and generally into the industrial organization. Efficient organizations, in reflecting and sustaining the values and activities of primary groups, thereby reflect and sustain also the values and activities of the social environment.

Conversely, the values and activities of an industrial organization are channelled back into the social environment. Some take the form of material wealth—the products and services of industry, the earnings of those who produce them. Others are the satisfactions or dissatisfactions, the education for responsibility or for irresponsibility, in short, the attitudes, habits, norms and structures which members develop through association in the organization. Socially efficient organizations enable their members to grow as members of autonomous groups, and to transmit these values and activities to the social environment; other organizations warp the development of their members, and this failure is reflected likewise in their social environment.

Among the efficient organizations we have referred to in this volume, the relationship with the social environment is particularly close in those cases where industry has helped to maintain the community in which it lives. The community has been diversified without being splintered.

Organizations which assist the development of the communities in which they live not merely allow, but encourage, close ties with the social environment. Besides sustained informal contacts, they consult with trade unions, civic authorities and other bodies about changes made inside the factories. They take pride if members at different levels of the organization serve as town councillors, members of committees and boards, and in all sorts of capacities in the community outside. They contribute to the housing of their members and supplement social services for them and their families. Welfare facilities are often extended not merely to them but to the community in general.

SUMMARY

The efficient industrial organizations that have been studied are well integrated with their environment and thus are a part of a community; and, like other parts, they provide community satisfactions. (Much the same applies to the relationships of a community and larger social units, like towns, counties, and nations.)

The close integration of work with other activities is the characteristic we found to be basic in established communities. The question is whether it can be attained in the conditions of modern industrialized society.

Several notorious bugbears of management—or scapegoats for bad management—were discussed: the problem of finding incentives for monotonous work; difficulties of technical change; problems of large-scale organization; self-interests interfering with common interests.

All these bogies have been overcome in one or another of the organizations studied in this volume.

The question then becomes: what are the chief characteristics common to all these socially and economically efficient organizations?

The most essential is close human association, without which there is no basis for co-operation. But this alone is not sufficient; close human association can give rise either to co-operation *towards* the goals of the organization as a whole or to co-operation *against* its aims (e.g., restriction of output). Something more is needed.

That "something", as indicated by other features that the organizations have in common, consists of: a wide dispersal of responsibility and authority at all levels; effective communication between groups throughout; a close correspondence between informal and formal structures and procedures; and close integration with their social environment.

With those characteristics, they compare favourably with other organizations in terms of earnings, output, and indices of personal satisfaction; and in the facility with which they adapt to new circumstances.

V. THE NEED AND METHODS FOR STUDY

"*. . . sometimes an observation essentially simple carries an importance for practical affairs far beyond anything that can be claimed for it of intellectual illumination.*"

Elton Mayo[1]

"*. . . lookers-on many times see more than gamesters; and the vale best discovereth the hill.*"

Francis Bacon[2]

Efficient industrial organizations deal successfully with the two basic problems of human association: they satisfy the material needs of their members, and they secure the maintenance of spontaneous co-operation. As was seen in our examination of the case studies, they do this by facilitating the intimate association of their members in small working groups. These groups are largely autonomous, free to adapt attitudes, habits, norms and structures based broadly on the experience of their members. They participate in the development of the organization's policy through arrangements designed to facilitate communication between groups. Through many channels the organizations draw on their social environment, and through many channels they contribute to it. These conditions are the distinctive characteristics of all socially effective institutions.

The techniques and arrangements for creating these conditions differ widely from one organization to another. They depend on the amalgam of cultural, technical and personal factors peculiar to each.

The organizations studied in this volume differ very widely in methods and formal arrangements. We will confine ourselves to just three instances:

Supervision. The arrangements include team-leaders for up to 10 workers and others responsible for up to 30 workers; also foremen in charge variously of 30 or as many as 80 workers.

[1] *The Social Problems of an Industrial Civilization*, p. 116.
[2] *Essays*, 1946, London, J. M. Dent & Sons (Everyman's Library), p. 147.

Methods of payment. Hourly wages, weekly salaries, piece-rates, contract work, and several more specialized schemes of payment by results are all represented.

Personnel function. Some organizations have specialist personnel officers; others deliberately keep personnel matters as part of line management's task; others again have training officers or technical specialists to attend to this.

The techniques and arrangements are suited to the peculiar circumstances of the organization largely by adaptation to the multiple processes by which members come to feel and think alike in some respects. Organizationally, the value of these processes is acknowledged by allowing free play to the forces that be, facilitating their communication throughout the organization, and formalizing the procedures that emerge. To that extent they are evolved through what Mayo calls "established routines of relationship" [1] and Whitehead, "the pattern of habitual dumb practice and emotion." [2]

But the conditions of modern industrial society increasingly require deliberate study of the conditions and deliberate adaptation of the processes. Technical change is rapid. Organizations are larger and more complicated, deal with a wider variety of problems and with more heterogeneous groups of people, than was ever the case in the past. To a large extent, "we have passed beyond that stage of human organization in which effective communication and collaboration were secured by established routines of relationship".[3]

In many crafts and sciences changing circumstances such as these have already caused the traditional method of communicating skills and attitudes—by supervised imitation and slow social conditioning—to be largely supplemented and superseded by the method of systematic observation, generalization and explicit statement. Not so in the field of administration—in the maintenance of spontaneous co-operation. There the method has so far remained almost entirely unchanged: skills are still learnt in the hard school of experience supplemented only to a very small extent by systematic methods. The interacting processes of study and deliberate adaptation have hardly got under way.

We have all seen some of the results: inadequate adjustment, crisis and, finally, breakdown—the cycle of events in the first chapter of this volume. The following chapters dealt with the results of successful adaptation and the processes by which they were achieved and being maintained. The present chapter is devoted to the problems and possibilities of developing systematic, explicit methods of studying the processes of adjustment and of communicating the skills necessary for adaptation. Such an attempt is relevant to everyone, and not merely

[1] *The Social Problems of an Industrial Civilization*, p. 13.
[2] A. N. Whitehead, *Adventures of Ideas*, p. 8.
[3] Mayo, ibid.

because all are affected by the results of successive and ever greater failures to adapt. In a very real sense everybody is to some extent engaged in social study. Every form of human association is an experiment in social science. Every home, club, factory and office is an experiment in co-operation, and all these experiments vary infinitely. Most learning takes place as a result of intimate participation in them.

Such a conception of "social science" may help to distinguish the special function of those whose profession is social study. The essential difference between their approach and the general approach is this: the social scientist attempts to make explicit and communicable a number of related general statements which will account for particular facts and make systematic prediction possible. Early in this process, he must, like all scientists, collect and evaluate facts.

BASIC PROBLEMS OF COLLECTING AND EVALUATING SOCIAL DATA

The collection of data for the study of current social problems raises three difficulties: (1) observation is liable to affect the situation studied; (2) second-hand data are very difficult to evaluate; (3) the essential uniqueness of each social situation raises difficulties of comparison and, consequently, of generalization. These three basic difficulties will be examined in turn.

Observation. The observer is part of the situation he is studying. His presence affects the facts he is studying, i.e. the behaviour of other people. In principle this difficulty exists in all sciences—according to Heisenberg's principle of indeterminacy, it is not possible to observe an atom without affecting its behaviour. But the observer's influence is particularly great in social study. People adapt to one another in most subtle ways. In particular, they alter their behaviour to suit their ideas of what any observer ought and ought not to see.[1]

The point is obvious when some crude adjustment takes place, such as occurs when a policeman intrudes on the activities of a solitary burglar. But it is of fundamental importance even when less obvious. For instance, it is unrealistic to walk to a group of workers unexpectedly and expect to get a true picture of what they do and say. Immediately, they adjust to the newcomer. They may shift to make room for him. More importantly, their behaviour will take into account that they know him (or not); like or dislike him; that he is a fellow worker, a foreman, or the manager; why they think he has come over to join them.

The following instance, recorded by the British factory study, shows the trend of output during the attendance of an observer for purposes of study: "In February 1943 one of the consultants decided to spend a considerable proportion of his time over the next few weeks on the further study of experienced linkers at work. During the seven weeks in which he was a frequent visitor the output of the 35 girls in the department increased steadily until it exceeded their previous

[1] For illuminating instances of this see Roethlisberger and Dickson, *Management and the Worker*, pp. 385—7.

three months' average by 11 per cent. Within four weeks of the consultant's departure output was back at its old level. Yet the consultant's visits had not led to the ending of the impasse in the development of training. The only physical change made during the period was the installation of a new clock at the request of the linkers."

In some organizations workers delight in fooling time-study men. Occasional success has sometimes led to attempts to carry out time study unseen. To that extent a problem of collecting social data has at least been acknowledged. But the method of overcoming it is despicable, and also incompatible with co-operation —just like making use of any kind of information expected to remain confidential.

The ideas of what the observer ought and ought not to see depend largely on the nature and the quality of the group's relationship with him. If the relationship is satisfactory the observer can reduce his "interference" to a minimum so that the situation remains largely natural; and can to some extent take account of his influence on it in his assessment of what he observes. We shall return to the matter of research relationship in the next section.

Second hand information, that is statements made to the observer by others, raises further problems of evaluation. Even when a person is talking about himself—often particularly then—his statement usually reflects more accurately his own wishes and his relationship to the listener, rather than his actual behaviour in situations he described. The same applies when a person makes a statement about others. It applies even to what are too often regarded as virtually infallible "facts and figures", such as statistics of stocks and materials, accounts, output, which are merely statements in a certain form. Statements are not likely to be accurate in the sense of giving a wholly unbiased report of what happened. They are to be considered primarily as symptomatic, referring not only to the situation under discussion but also to the reporters' own thoughts, feelings and relationships.

For instance, a worker may explain to his foreman that he was absent because ill. In a more candid conversation with a workmate he may expand this to say that, although he was "slightly off colour", he might well have been at work if he had not had something else to do: he had said "illness" to the foreman because it was the easiest explanation. In the relationships between worker and foreman "illness" was the most re-assuring explanation to give. In the more candid relationship, the more complete explanation was "illness" plus "personal business".

Second-hand data are difficult to evaluate for yet another reason. It has been noted that, at best, the statement consists of the reporter's views of what happened, coloured by his attitudes and relationships to data and in the particular situation he is describing; and that the statement is liable to be affected further by the situation in which the reporting takes place, particularly by the reporter's relationship with the listener. Thus, usually without his being aware of the fact, but sometimes deliberately, the reporter's version of the situation is distorted. It may be also incomplete: partly because his choice of data

to report, out of the numberless details that make up a social situation, may not correspond to the choice the listener would have made to assess the situation; but chiefly because his social conditioning leads him to take for granted, and hence not to notice or report, what are perhaps the most important aspects of the situation. Abstraction is inevitable. But unwittingly the reporter is liable to omit from his description features of the situation which are essential to make it meaningful to a person of different background.

For instance, a case of absence may result from a complicated network of factors. The most obvious factor may be illness or business. But an equally important factor may be the failure of the absentee's desire to be at work or of his sense of responsibility to control the inclination to absent himself. This in turn may reflect the management of the department. But only the first kind of factor is at all likely to be reported without much further thought.

The difficulties of evaluating second-hand data can be overcome to the extent that the student can get to know the reporter's views of the situation and of the listener, and can create the conditions in which statements can be elaborated, checked, and supplemented. A wise listener will not expect a "yes" or "no" answer to a question that could not be answered without further thought and in less than 1,000 words; or a balanced statement from a person afraid that what he says may do harm. He will rather attempt to create the conditions, and particularly a relationship, in which the reporter can speak at length and at ease.

The following instance, taken from the British colliery study, shows how a statement becomes meaningful through elaboration:

". . . In discussion of mining matters with a mining man, it is not uncommon for him to say something like this: 'Changing "Y" colliery over from direct (electric) current to alternating current resulted in substantial increases in output.'

"Such a statement does not explain a great deal. On the basis of it, one might jump to all sorts of conclusions. But one might be able to get it expanded. 'How is that?' the outsider asks.

"'Well some of the machinery was changed, for one thing', is the reply.

"'Oh, so better machinery accounted for the increase?'

"'Not entirely. Some of the plant was reorganized at the same time.'

"'How did that help?' (Quite clearly the situation has a lot more to it than the outsider might have thought.)

"'In the reorganization, the pit was reorganized, and some sections which had been widely dispersed were brought closer together.'

"'So it was easier to supervise?'

"'That's part of it. But what was probably more important was that as a result of the reorganization, it was possible to work the men in smaller teams, and the spirit improved.'

"Thus, by going into the matter—and often only by going into the matter—the outsider discovers that a mining man's phrase may subsume whole paragraphs of relevant information. So accustomed is he to talking with his colleagues that he uses a veritable verbal shorthand."

It is important to emphasize that the difficulties of describing, measuring and evaluating social situations are essentially inherent in the

nature of social data and are not limited to the early stage of development of systematic social study. Various techniques are available to reduce the difficulties. It is technically possible, for instance, to supplement observation and memory by the use of recording instruments, and thus secure such important facts in a conversation as repeated statements, pauses, tones, overtones, and data on generai behaviour. It is possible also to measure certain aspects of the situation—e.g., how many people are present and the length and number of observations—and to compile indices of such matters as output, absenteeism, labour turnover, and sickness. And these data can be subjected to complicated analyses.

But evaluation remains, and will continue to be, most difficult. The recorders of social data are humar beings who note what they are preconditioned to note. The observations may be both incomplete and unconsciously distorted. Finally, by their very nature, social data can be only approximately exact.

Generalizations are based primarily on accumulated observations of related and broadly similar, but always unique, situations. Experiment is possible only within broad limits. There is no exact knowing of what "might have been", no possibility of re-establishing the *status quo* and trying an alternative course of action in identical circumstances. For instance a doctor cannot compare the effects of (a) amputating and (b) not amputating a leg, in one case. He can only compare the effects in similar situations: either compare two patients of whom one has been operated on and the other has not; or compare the condition of patient Smith before amputation with his condition after amputation. All generalizing on social data follows a similar procedure.[1]

Significant statistics are therefore difficult to collect and difficult to interpret. Statistics express complex, unique facts in terms of standard units. To take a simple example, we can certainly count the human inhabitants of the earth. But when we count *men* we are reducing individuals to a common denominator. For many practical purposes this would be inadequate or misleading. There are men in Britain and men in China, Britons married and unmarried; Britons with larger or smaller families or none at all; poor and rich Britons . . . and so on down to the man Smith and the man Jones. Again, in an industrial situation the "yes" and "no" responses of workers to some questions can be counted and correlated. But, should a "yes" from Jones be reckoned the same as a "yes" from Smith, or just enough to offset a "no" from Brown? Jones might, for instance, be the natural group leader, Brown an unpopular member of the group. In short, classifica-

[1] *In principle* the difference between the exactness of physical science and the "approximateness" of social data is, again, only a difference of degree. Much in physical science is uncertain, and physical phenomena are no more than statistically probable. But the difference is so great as to constitute for practical purposes a different order of things; by comparison with the range of behaviour of a social group, the physical world is one of certainties.

tion, indispensable to measurement, eliminates detail and thereby, often, important aspects of quality. Now, the degree to which detail can be usefully abstracted varies with the purpose for which the data are to be evaluated. Thus, the mere number of underground workers is a good guide to the number of miner's lamps required to be kept at a colliery, while it is only a partial guide to, say, the number of supervisors required, and a very inadequate guide to the kind of leadership the men want. Often social statistics eliminate too much detail to be usefully evaluated.

The difficulty in evaluating statistical data can be put in another way. The choice of phenomena to measure already implies evaluation. Statistics abstract a feature of a complicated social situation and thereby stamp it as significant, in the same way as observation and memory fasten on to facts that are regarded as noteworthy. But criteria for determining what is really significant have barely been evolved and vary from situation to situation. Important features are thus liable to be omitted by the statistics and in their evaluation. At every turn, the observer is thrown back on his experience of similar phenomena in their whole context, in the total situation.

This section can be summarized as follows: what are commonly called "facts" can relate to any of a variety of levels. The first level is the situation itself in its reality: this is strictly "facts". From the facts there are several stages of remove (or abstraction) thus:

	Level of remove from the facts
The situation: "the facts"	
Photographic plus phonographic record.	1st.
Full report by one medium.	2nd.
Detailed description.	3rd.
Generalized description	etc.
Classified (statistical) description	etc.
Statement of uniformities (theory)	etc.

With social data there is considerable danger of falling into what A. N. Whitehead has called "the fallacy of misplaced concreteness"—to get the levels mixed up and to regard the data as more factual or more significant than they really are. The danger springs from the wider scope of social data. What physical scientists regard as "facts" —the "objective" world—is only one part of social data. The ways in which people *see* the objective situation are social facts as important as those in the objective situation itself. Both are parts of reality.[1] Thinking does, in a sense, "make it so".

[1] Again, the difference between physical fact and social fact in respect of objectivity, is only one of degree: since the development of the concept of relativity it has become accepted practice in physical science to describe the relationship between observer and observed (physical fact). This aspect of "relativity" is far more important in social than in natural sciences.

For example, in one company the assistant manager of a large branch factory was thought by his subordinates and by his immediate superior to be inadequate for his job. But the organization's general manager was of the opinion that this assistant manager was quite adequate. Both these contradictory opinions were relevant "facts" about the organization and both influenced behaviour, that is, the objective situation.

High levels of abstraction are as yet rarely attained in social science, and even then form only a small part of the total description. A doctor's observations are probably one part measurement—e.g. of temperature, pulse, blood pressure, blood composition—to 99 parts description. The proportions may be much the same for social data in general.

Evaluation of social data in terms of "factualness" is a continuous process. It guides the collection of data; and new data affect the evaluation. The collection and evaluation of data are thus closely interwoven and the basic difficulties connected with them are continuously present. Professor Homans suggests the following list of seven points as a brief guide for dealing with data:

"1. Look first at the obvious in its full generality. Only then does science economize thought.

"2. Do not use high-order abstractions until you have exhausted the possibilities of low-order ones.

"3. Talk about one thing at a time. That is . . . in choosing your words see that they refer not to several classes of fact at the same time, but to one and one only. . . . Corollary: once you have chosen your words, always use the same words when referring to the same things.

"4. . . . Once you have started to talk, do not stop until you have finished. That is, describe systematically the relationships between the facts designated by your words.

"5. Science consists of the 'careful and complete description of the mere facts'.

"6. Cut down as far as you dare the number of factors considered.

"7. Recognize that your description must be abstract, since it deals with only a few elements of the concrete thing. Recognize the dangers of abstraction, especially when action is required, but do not be afraid of abstraction." [1]

THE RESEARCH RELATIONSHIP

The observer affects the situation he is studying and needs to take account of this disturbance in his evaluation of the data. In evaluating second-hand data, he depends on knowing how the reporter looked at the situation he is reporting and on creating the conditions conducive

[1] George C. Homans, "A Conceptual Scheme for the Study of Social Organization", *American Sociological Review*, Vol. XII, No. 1, February 1947, p. 13.

to a full and accurate statement. Finally, given the uniqueness of each social situation as a whole, generalizations about its parts are difficult to draw and to apply. There is no hope of solving these basic problems of collecting and evaluating social data except within a satisfactory research relationship.

If the relationship is satisfactory, the observer's disturbance is likely to be small and capable of assessment with fair accuracy; it is possible to secure statements from people whose points of view are known and who report as accurately and fully as they can, and to check and elaborate them; last, but by no means least, the conditions exist in which the findings can be applied. If the relationship is unsatisfactory, the observer finds it difficult or impossible to secure access to significant data; statements, when he is able to secure them at all, are incomplete and biased—perhaps deliberately so—and cannot be evaluated accurately; and it is difficult, if not impossible, to apply the findings. The use and value of techniques to aid the collection and evaluation of data themselves depend on the quality of the research relationship.

Three basic features of a satisfactory research relationship may be distinguished; they are permissiveness, collaboration, adaptation.

Permissiveness

The people concerned must be in agreement with the study, its purposes and methods. Significant data cannot be obtained or applied against their wishes. They can sabotage the study and, if inclined to, they will. This happens sometimes in time-studies carried out prior to fixing rates and in introducing the various devices by which organizations seek to check and control the activities of constituent units. To secure sound data it is not enough that the purposes and methods of study be essentially sound and helpful; they must be seen to be so by the people concerned.

Agreement cannot be assumed to exist even when a group or an organization itself asks for a study to be carried out. The group may not be aware of the implications of what it is asking. The suggestion may not be approved by important members. It may have arisen on the spur of the moment. The agreement needs to be real and representative, and it is necessary to learn the criteria "real" and "representative" proper to the group. A study approved, for instance, only by top management, or only by the supervisors, or by only some of the workers would be regarded as an extension of that section's views and activities. Where the suggestion originates elsewhere, special efforts may be required to secure adequate agreement.

This early stage cannot be skimped. Systematic study begun without agreement is likely to be inadequate and may well fail of its purpose. Sometimes a considerable length of time passes before agreement is

secured, particularly if the observer is not well known to the group and is tested out by it to a certain extent before it agrees that systematic study may start. The stage may yield little in the way of coherent data. But it allows important processes of adjustment to get to work. The group examines the suitability of the outsider to carry out the study and adjusts itself to him and his prospective activities. Initial relationships are strengthened. The outsider begins to learn the manners and customs of the group in which the study is to be carried out, which can differ in important respects from those of similar groups quite close by. He becomes increasingly sensitive to these local traits; widens his relationships to include other people essential to the study; notes his progress as an indication of the likely importance attached to the study and the problems it is likely to meet; clarifies his function and the purpose and methods of the study: until agreement is secured.

The outsider is, in short, permissive—allows himself to be guided in matters of aims and procedures by the group which is the focus for study. This attitude on his part is a basic feature throughout. He does not rush, he poses problems without forcing answers, and generally proceeds only with the substantial agreement of the group with which he is working.

The problem then agreed upon for study may be small, and to the outsider's good knowledge, inadequate in coverage. It usually is. But it performs the function of a trial run, in which the personnel and the aims and methods of the research are further tested and adjusted to requirements. Considerable insights can be gained and understanding significantly increased through the process and findings of a very small study. This done, it may be possible to move on to something of greater significance.

Regarding the scope of the study, people may agree, for instance, to study the problem of a high labour turnover of recruits by seeking the shortcomings of the selection procedure. Before long it becomes clear that applicants have certain characteristics in common which may suggest that recruits are drawn from special sections of the community; also that there is a sharp drop in the trainee performance and an increase in the rate of leaving as new workers finish training and start production alongside senior workers. So that what started as a study of the selection of young recruits comes to include problems of contacts with the community, and of change-over from training to production; and to involve new and old workers, supervisors, and other members of the organization and the environment.

The following illustrates the dependence of research procedure on developing relationships: a day or two after his introduction to the officer who was to be his main liaison with the organization, and after seeing the works and learning something about the company, the research worker asked the officer if he might spend a little time on the factory floor with no other purpose than to "get the feel" of the place. His request was instantly turned down on the grounds that "people in the shop would start all kinds of worries and rumours—that the firm is to be sold or something like that". The outsider dropped the subject. Only a few days later the officer himself spontaneously suggested that the observer might "just wander about the shop and chat with whoever he liked". Clearly the

relationship between them had strengthened and the same danger was no longer apprehended.

The permissive attitude of the outsider helps the process of adjustment and promotes the study. He listens to people's anxieties; enables them to raise problems they wish to raise and to raise them in their own way; helps to clarify their problem—many of them very indirectly related to the study; and reassures them, less by word than by deed, that he only proceeds by agreement. Often anxieties are greatly reduced in the process of communication. Listening has further advantages over guiding the discussion: the sequence and ways in which issues are raised provide clues to the significance attached to them; and the outsider, by listening rather than asking, avoids leading questions that might result in conscious or unconscious bias in the reporter's statements.

For one instance in which listening, allaying anxieties, and helping to clarify the issues aided adjustment, we may refer back to page 102. The agreement of the chairman of the shop council was essential to further discussion of a proposal put forward by the shop manager. He gave it after three-and-a-half hours' talk with the outsider.

Permissiveness is put to its ultimate test if there is a persistent failure to agree at any stage, and the outsider offers to discontinue the study. This makes it absolutely clear where the primary responsibility lies: namely, with the group studied. Agreement to continue the study can result from such an extreme form of testing and reassurance. The study ends as it began, with real and representative agreement.

Collaboration

In a satisfactory research relationship, the people studied do not merely allow the study to be carried out, but participate in it. Securing their active collaboration is like securing a vote of confidence: they consider it worth while to collaborate. This affects the aims and purposes of the study, the methods for carrying it out, and the relationship between the group and the outsider.

The advantages of collaboration are clear. Almost invariably the observer is deficient at least in his initial knowledge of the group's attitudes, habits, norms and structure—its culture; in standing with the group; and often in appreciation of technical issues. The group, and others more or less closely involved (such as specialists in various fields) not only make up these deficiencies but have much else to contribute. They help the outsider to avoid pitfalls, to assess the total situation and to make increasingly significant observations and analyses. The outsider is therefore not alone; he collaborates with the people in the situation immediately studied and, beyond them, with others also, more or less closely according to the degree to which they are concerned.[1]

[1] For an example of some of the results of collaboration with people in the social environment, cf. pages 92—5.

Through collaboration much more data can be secured than by the outsider working largely on his own. The findings can also be discussed, elaborated and checked. The responsibility for the study is spread. Understanding increases as the study progresses. And the communication and acceptance of the eventual results is but the last, almost inevitable, stage of a continuous process of joint activity.

But the closer relationship of collaboration can be secured only through overcoming several important difficulties. The study of significant problems tends to arouse anxiety in the people involved. They feel strongly about them and look forward apprehensively to the findings. Even eager welcome of outside assistance is likely to be mixed with an inclination to draw the observer away to areas of slighter importance. Sometimes, indeed, it is more comfortable for a group, like an individual, to live with a deficiency—sometimes even using it as a shield or crutch—than to go through the painful process of recognizing and dealing with it. To some extent this applies to the whole group. But it often applies particularly acutely to single members or small sections of people included in the study. They may appear eager to collaborate, perhaps in the (conscious or unconscious) hope of guiding the study towards findings of greater comfort to themselves. They may try to monopolize the attention of the outsider. One way of doing this is to burden him with information which is expected to remain confidential. The permissive attitude of the outsider lends itself to it. The outsider may have to straighten out this confusion. He can clarify his function and demonstrate that it depends on broad agreement and collaboration. He can help certain individuals and sections with the approval of the whole group. All can agree as to the conditions on which data are collected and evaluated.

Fundamentally the difficulties of collaboration are overcome in the general context of the research relationship. The progress of the study is governed by it. The outsider does not disclose confidential information. His standards of ethics are as high as, and similar in kind to, those of doctors and lawyers: confidential information is, by definition, information capable of causing harm to someone if misused.

Mr. Chester I. Barnard reflected this high sense of responsibility when describing a situation in which he had participated: "I have not made it available in printed form sooner because it involves some criticism of . . . and because I was reluctant to run any risk of appearing to make the representatives of the unemployed 'guinea pigs' in a public way. The lapse of 10 years now makes it unlikely that any embarrassment will follow its restricted publication. The case was not reduced to writing until after my first lecture in 1938." [1]

The same discretion is observed when the outsider realizes the existence of problems with which the group is not yet able to cope. He does not, for instance, upset a delicate situation by making relationships explicit when the balance depends on their remaining implicit. Data

1 Chester I. Barnard, "Riot of the Unemployed", Lecture at Harvard University.

are collected, communicated, and jointly evaluated. The question of when and how to communicate findings to other outsiders is a matter for joint decision. The progress of the study is the progress of all concerned.

Adaptation: Effecting and Recognizing Change

Collaboration results in change. People who participate in collecting and evaluating data themselves change. They gain understanding of their problems. And they gain understanding of the process of understanding—collecting and discussing data, seeing other people's problems, finding that problems can be resolved, collaboration with an outsider. Collaboration within a research relationship thus may affect—change—the attitudes, habits, norms and structure of the group, its culture and its informal organization.

Another basic aspect of the research relationship relates to getting these informal changes recognized formally, for instance by making corresponding changes in the formal organization of the group's activities. This may involve further people, since, in the complex balance of forces that make up a community, even quite small changes are likely to have repercussions and affect many people at different levels of the organization and its social environment. It is probable, therefore, that the processes through which the study develops from its small beginnings towards significant problems will gradually involve many persons and require their help in arriving at a solution, that the whole community will become engaged in "working through" a problem, and the need for formal rearrangements will be generally recognized.[1]

The features of a satisfactory research relationship correspond closely to the features ascribed in the last chapter to efficient organizations. There is nothing surprising in this. Study and adjustment are continuous processes in healthy communities. The particular features of the satisfactory research relationship reflect the general features of the community: permissiveness goes with autonomy; collaboration for study with general participation; and, as we have seen, a socially effective organization is continually concerned to have formal arrangements take account of the informal, and to be closely integrated in the community.

"OUTSIDERS"

In discussing the basic problems of collecting and evaluating data and their solution within a satisfactory research relationship, we have used

[1] For example, cf. the study describing the process of changing over from a system of payment by results to one of payment by time, pages 96—105.

the terms "observer" and "outsider" without specifying who this might be or when his collaboration is called for. This section is devoted to the consideration of these questions.

We are all social scientists in a more pervading sense than we are all chemists or singers. For all of us life consists of a continual process of collecting and evaluating social data and adapting ourselves to our environment. Janet concluded that this adaptation is by far the most complex and difficult of human skills. Often this process of collecting and evaluating data and of adapting is so closely integrated that it is not noticed at all. We eat, sleep, and generally rely on habitual responses to the varied stimuli of our environment. The next stage can be seen as one in which the processes of collecting and evaluating data and making the adjustments considered necessary are separated out. This happens whenever we are required to adapt to an "unusual" situation. With more and more difficult problems of adaptation, the process may be increasingly deliberate. But it is usually possible for us to deal with such problems as we meet, by solving them or by living with them. In the normal course of events the assistance of no one outside our own group is required at any stage in the process. Indeed, if an individual or a group resents and rejects outside assistance, this is often a sign of good health, of personal and social integration.

An outsider is, in brief, a person regarded as not closely concerned. A passer-by trying to stop two boys fighting in the street is an outsider to their conflict, though he has some interest in maintaining the King's peace. Their teacher is an outsider, though one more closely concerned and more likely to become a significant part of the situation to which the boys are trying to adapt. Even more closely concerned are their classmates and families. The word "closely" depends for its definition on the attitudes of the boys. They are at the centre of the problem, surrounded by people whom they regard as outsiders, more or less. If somebody not closely concerned tries to interfere they are likely to feel that he ought "to mind his own business", and, if they dare, they may jointly tell him so.

It has been seen how an outsider can help those immediately concerned to collect and evaluate data and to adapt. This again is a process too usual to be specially noticed. Our habits and skills of adaptation are drawn principally from our family, friends and other people with special standing; we continually rely on them, as a matter of course, to help current adaptation. Thus members of a working group enlist one another's help in meeting personal or general problems. Depending on their relationships with them, the supervisor, the workers' immediate representative or other people, are drawn in more or less frequently to assist in the solution of problems within the group, and almost always to help groups to adapt to one another. "Supervision", "co-ordination", "advice" are all concerned primarily with facilitating

adaptation. Social processes and organization in general can be looked at in the same way.

It is the function of specialists to advise on particularly difficult problems of adaptation. Thus the development engineer advises on technical problems, and the sales manager on how to dispose of the organization's products. That is, they advise on a part of the complex process of adjustment. In recent years specialists have been increasingly employed to concern themselves with the organization itself—to increase members' capacity to adapt and to advise on organizational structure. The appointment of specialists in matters of personnel, training and administration is to some extent a tacit acknowledgement that adaptation is becoming increasingly difficult.

Specialists on problems of personnel and administration are not all equally well placed to assist in the process of adaptation. Some, particularly administrative officers, tend to be concerned mainly with formal arrangements. They may often be too preoccupied with perfecting administrative techniques and structures, and too little concerned with formalizing arrangements that work in the particular organization. To that extent they are out of touch with the real problems of the organization. This possibility is the more likely the larger the organization; and it is as a rule only the larger organizations which have specialist administrative officers.

A personnel officer is usually in a more advantageous position. He often sees individuals when their problems of adjustment are likely to be particularly great; for instance, when they apply for work, when they have special difficulties at work or at home, when they leave. He is usually closer to the workshop and better able to build up good relationships. He is expected to draw from his experience observations and principles to guide personnel policy.

One personnel manager put it as follows: " . . . one of the most important responsibilities of personnel men is to conduct constant research. . . . We (personnel managers) have at our command the finest research material in the world. . . . If we can but analyse this material and experience, to draw from it certain observations and principles, and to record such findings as a history of progress in our companies, we will have done a marvellous research job".[1]

An officer immediately responsible for training workers for their job may be in a particularly good position to assist adaptation. (Where it is separated from general supervision, training is usually a part of the personnel officer's job, but sometimes there is a specialist training officer.) Like the personnel officer, he also has close contact with individual workers when they are faced with particularly great problems of adaptation—during training and retraining—and his contact continues for a considerable period. He can often help trainees to find

[1] Lawrence A. Appley, "Functions of the Personnel Executive", *Bulletin No. 1*, Industrial Relations Section, California Institute of Technology.

suitable work and to team up satisfactorily with other people. He usually has the advantage that his function tends to be better understood by supervisors and other specialists. It is, therefore, less likely to be interpreted by them as a threat to their status. It is usually regarded as quite proper for him to maintain some contact with the trainees after they have joined a work group under a supervisor and to collect data for further study.

The basic advantages and disadvantages of having "outsiders" to help collect and evaluate social data, and in adaptation, are quite clear. The "outsiders" have varied experience to contribute to solving the problems of a particular group or organization; and, having only limited concern in the solution of the problems, they can ease the tension which often prevents people from facing the issues and from adapting to new circumstances. But they know little of the intricate network of forces which make adaptation in a particular situation difficult and determine the ways by which it can be achieved; and they may disturb the situation.

Mr. Chester Barnard compares the position of outsiders and insiders thus: "... a mere description of the events as seen by a keen observer having no knowledge of the forces at play would be a bare recital of acts, incomplete, probably misleading, and possibly quite erroneous, because of the omission of the understanding and the intentions of the participants, although it might be dramatic and the acts even attended by important consequences. A part of the point of this observation lies in the fact that in many instances the mere introduction of such an observer into the situation would itself be a sufficient change of circumstances to radically alter the case ... in many situations in which social forces are at work, direct objective observation is either necessarily deficient or even destructive of the data.

"The alternative ... presents the other horn of the dilemma. The statements of participants certainly are capable of describing many of the overt acts involved, and in addition much of the understanding of the participants, and of their intentions, especially those of the relator. But such statements are subjective. They are often interpretative of events much more than descriptions of events. They are notoriously unreliable, and can only be safely used, like the patient's statement of symptoms, by one skilled in interpreting such statements and possessed of a thorough knowledge and experience."[1]

SPECIALIST SOCIAL SCIENTISTS

The main contribution of specialist social scientists is more general and long-term than the direct help they may be able to render to any particular group or organization. It can be divided for convenience into two parts: the study of normal, healthy social conditions and processes; and the acquisition of systematic knowledge and understanding.

[1] Chester I. Barnard, "Riot of the Unemployed".

Studying the Normal

The establishment of standards and the elaboration of guiding principles for the solution of social problems depend on the study of normal behaviour. Without such study it is impossible to get to the root of a social problem or to see how it might be prevented in future. The position is similar in medicine. Illness calls for medical help. The doctor relies on his knowledge of the complex balance and activity of the healthy organism to pick out, from the welter of facts to be observed, those for attention and treatment which are relevant to the illness. The process is basically the same in all human learning. An appreciation of the non-problematical, the normal, determines what we regard as the problematical, the abnormal, and hence select for attention.

The study of the normal is as yet little developed in the social sciences. As a result, analyses abound in which attention is concentrated, for instance, on the changes in the environment to which people find it difficult to adapt; whereas the peculiarity may lie rather in the insecurities, particularly of human association, which make adaptation so difficult. This volume has been primarily concerned with the study of the normal.

One reason for the lack of development in this direction is that these are early days in social science, and social scientists have felt obliged to make immediate contributions to pressing problems of industrial society. Another reason is that social scientists are often not well qualified to study the normal in the society in which they live. Unless they know some one else's culture they do not really know their own. They are part of their culture and are apt to take for granted the disciplines and routines which their culture takes for granted. These may include many most important features which though "simple", "obvious" and "commonplace" are peculiar to the society in which the scientist lives.[1] As Homans puts it, ". . . the things we take for granted about a social system are apt to be amongst its most important features. When we say, 'People do not often commit murder', our statement is commonplace, but it is of the first importance".[2] The study of other cultures helps us to learn what is innate and what is learned in our habits and customs. Hence anthropologists have been designated as "constant rediscoverers of the normal". In other cultures we find, for instance, the active practice of that "knowledge that has escaped us", not least the knowledge of the skills of maintaining spontaneous co-operation.

[1] We have noted the same difficulty in discussing problems of evaluating second-hand data, cf. pages 127—9.

[2] G. Homans, *English Villagers of the Thirteenth Century*, 1932, Cambridge, Mass., Harvard University Press, p. 403.

"Theory without fact is worthless; but fact without theory is even more worthless."[1] Both are essential: no theory was ever formulated without facts, although the formulator may have been unaware that he was using facts, or what facts, or how selected; and no facts have any meaning without theory, however unaware a person may be that his "common sense", for instance, is indeed theory. A child holds his hand under the hot-water tap and concludes that doing so heats the water; he later learns other ways of observing and notices that the water gets hot whether he holds his hand under the tap or not, and changes his theory accordingly. An adult, noticing a close correlation between the human birth rate and the stork population of Canada, refuses to believe that the two are related as cause and effect. Another adult finds a correlation between the youthfulness and the rate of absenteeism of employees in factory "X" and assumes a causal relationship; but when he later finds that in factory "Y" there is no such correlation, he discards his theory and seeks another.

The social scientist proceeds in the same way. His appreciation of theory, which includes his own past experience, guides his search for significant data among the limitless facts that might catch his attention in a situation, and leads him to differentiate between symptoms and causes, to recognize the situation where treatment has led only to the substitution of one symptom for another, and generally to assess his data and compare them with those of other workers in his and other fields of study. The data substantiate his theory as it stands or lead him to supplement or revise it. Thus a body of knowledge is built up, differentiating between kinds of phenomena, between phenomena of varying degrees of generality, and between tested generalities and the hypothetical. It can happen that two apparently contradictory theories seem equally valid. In the physical sciences, for instance, current evidence suggests that light can be seen as a wave motion or as a corpuscular movement: so that, according to Sir William Bragg, physicists use the wave theory on Mondays, Wednesdays and Fridays, and the corpuscles theory on Tuesdays, Thursdays and Saturdays—which is, Sir William observes, "after all, a very proper attitude to take in the circumstances". As more data become available and as the acquired knowledge is tested and further elaborated, such contradictions will be found to be illusory or will be resolved in favour of one theory or the other, or a new explanation will be found.

The body of theory to which most social scientists would subscribe—the hypotheses which have been most widely tested—is as yet inevitably small. It may be summarized in six statements:

1. Man is a social animal. This means that a very considerable part of his behaviour is inculcated by his culture and social environment,

[1] Calverton, *The Making of Society*, New York, The Modern Library, p. 3.

but not that his individuality is sacrificed to the herd instinct as is the case with, say, bees and ants.

2. An individual's behaviour is a composite of his reflexes, trained reflexes, socially conditioned habits, and thought. The normal response in any given situation is a response of the whole being. This response is always a product of heredity, plus total experience, plus capacity for novel thought.
3. In all his complexity each individual is unique. But although the whole defies quantitative assessment, aspects of people's make-up and activities can be usefully measured.
4. A group of individuals has a distinct character and can be considered as a unit for some purposes. This means that the group is something more than the sum of its parts namely, a system of relationships among individuals which modifies the behaviour of members; but it does not mean that the group is an organism in the proper sense, in which the parts would merely be cells of the larger unit.
5. A system of human relationships is a complex balance. A change introduced into the system will have manifold effects as the system strives for a new equilibrium integrating the new element, or seeks to regain its old equilibrium without it.
6. The relationship between cause and effect is always complex. "All (i.e. every persistent factor) is cause and all is effect",[1] and any change is likely to have ramifying effects, with causes producing symptoms and symptoms causes. (Langmuir has termed such effects "divergent phenomena".[2])

In the present volume we have had occasion to generalize on the case studies, comparing one with another in the light of previous research and using the growing body of theory as the main framework of a conceptual scheme for looking at our material. A résumé of our generalizations from the case studies is given at the end of the last chapter of the book.

An example may show the way in which theory and method are used to decide what is a significant observation. Thus, we note as significant that all the efficient organizations studied in this book had certain characteristics:

1. Each was made up of largely autonomous and responsible groups.
2. These groups formed a whole by collaborating with one another.
3. There was close correspondence of formal and informal procedures and structures.
4. The relationship between the organizations and the wider communities of which they formed a part was close and complex.

These four statements could be summarized at a higher level of abstraction: it was typical of the organizations that they provided, in

[1] L. J. Henderson, *Pareto's General Sociology*, 1937, Cambridge, Mass., Harvard University Press, p. 72.
[2] Irving Langmuir, "Science, Common Sense and Decency", *Science*, Vol. 97, No. 2505, 1 January 1943, pages 1-7.

collaboration with the wider communities, adequate, routine opportunities for intimate human association.

Now such a general characteristic is noticed and considered significant only if your assumptions about human behaviour include the six listed above as the framework of social theory. That is, if individual behaviour depends on, and stems from, intimate relationships with others and is complex and holistic, then the first essential of an effective industrial organization will be that individuals find in it opportunities for regular participation and collaboration, and that these experiences consolidate with their life outside working hours. Given the theory, these are the aspects that will be looked at in particular organizations.

The elaboration and perfecting of the structure of social knowledge is not a "mere academic exercise"—something of no practical use. The social scientist is not looking in a vacuum for some magic, hitherto unsuspected science to apply *to* management, as a common phrase so carelessly puts it, but trying to find the science *in* management; that is, the structure which leads to the understanding of social phenomena within the compass of the "oldest of the arts, newest of the professions". Structure makes the difference between knowing a fact and understanding its meaning. We have noted how theory guides the choice and evaluation of social data. It guides also the methods by which data are collected. The following, for instance, are four "tentative working principles" which a group of social scientists extracted from its experience:

1. It is essential to obtain the approval and co-operation of both management and workers before initiating research into industrial relations.
2. The study of sub-groups within a firm is unlikely to be effective without studying the overall relationships between groups in the firm as a whole, particularly the relationships among groups at the top of the hierarchy.
3. To achieve successful changes in relationships within a firm it may be necessary for adaptation to go on at the top of the hierarchy as well as in groups lower down.
4. The outsiders are subject to strong influences from the social field in which they are operating, just as they affect the situation. Study of the effects upon the outsiders is therefore necessary, in order to understand the contributions of the outsiders to social changes.[1]

The structure of social knowledge determines to what extent the observer can limit his attention to features of greater or lesser significance and use and develop accurate diagnostic tools. Indices of productivity, earnings, labour turnover, absenteeism, sickness, accidents and strikes are just a few of the tools we have mentioned. Others are

[1] H. A. Hutte, "Experiences in Studying Social-Psychological Structures in Industry", *Human Relations*, Vol. II, No. 2, 1949.

being developed and improved. For instance, Mr. S. D. M. King has found it useful to evaluate the status and role of each member of a group according to (a) the member's own perception of his status and role, and (b) the perception of the rest of the group of the member's status and role. Somewhat similar measures have been developed by J. L. Moreno, John G. Jenkins and others, and may eventually yield more precise classifications of human qualities and relationships. Again, interview techniques are being refined and some yield potentially measurable data. But such measures are useful only in relation to wider understanding.

Finally, understanding of social data governs our ability to foresee the trend of events, and can guide our actions. The better the conceptual structure, the more accurate the forecast and the guide. Thus we can assume for instance, that each person (or particular set of people) will have the common characteristic of wanting to associate closely with others; that requiring him to move rapidly about on his own reduces the conditions in which intimate association is possible; that the failure to meet this need will result in some sort of social sickness; and that the sickness is more likely to express itself in illness, absenteeism or labour turnover, than in, e.g., a strike, which requires corporate action. We can assume again that in intimate association with others, people develop common attitudes, habits, norms and a structure which make them into a cohesive group; and that this group, given the opportunity to grow and to co-operate with other groups in developing the policy, procedures and structure of the organization, is likely to be socially healthy, responsible and co-operative. Such a sequence of events may not apply strictly to every person or every group of persons. But even at this stage of social understanding the chances are that it will.

The slightness of the structure of social knowledge to date is thus no reason for not using what there is. It provides the best available guides to the collection and evaluation of data. It makes meaningful the particular experiences of men and women in their capacities as workers, housewives, officials, administrators, educationists and social scientists. The structure will be improved and strengthened through use, through having new experiences fed into it to be evaluated.

We cannot be certain that the progressive development of social understanding will be accompanied by equally progressive improvement in social skills. It may be, for instance, that the weight of evidence will grow to show that such aspects of modern industrial society as great geographical and social mobility are essentially ill-suited to human life. Again we cannot be sure that consciously acquired skills will be immediately effective. The evidence suggests that the substitution of conscious for intuitive skills results at first in decreased effectiveness. But there is no other way of progress. Like the player who has reached a stage where he can improve his game no further

except by changing his stroke, we may expect a period of awkwardness and decreased effectiveness while the old stroke is unlearned and the new painfully acquired. This period comes to an end only if and when the new skills are fully integrated in the dynamic pattern of everyday life.

In the matter of our own behaviour we have already taken the first step. To self-consciousness we are committed; the problem now is to sift the old skills and construct and integrate the new.

SUMMARY

It would be absurd to suggest that this chapter could be an adequate substitute for supervised training. No skill can be learnt from verbal description alone. But it is hoped that this description of the processes and problems of social science will serve at least as a warning against the serious pitfalls in research; that it may be of assistance to some who are already engaged in this work; and that, for those—whether they be university graduates, managers or rank and file workers—who must evaluate social situations without prior specialized training in research, this statement on method will serve as an aid to reflection.

For the latter purpose—i.e. the all-important process of pondering, sorting and evaluating observations—it is well to point once again to: the "scale of fact and abstraction" (page 131); the list of "do's and don'ts" (page 132); the outline of theory (pages 142-3); the four "working principles" listed on page 144.

And, in view of the complexities of research and evaluation in social science, it is perhaps desirable to restate in briefer form some of the most important general points on method. More than in any other science, the value of research in human relationships depends on research method; and the more significant the research to be done, the closer the connexion. Method is of unique importance from the first contact to the last. At least four reasons for this can be stated:

1. The most important information is by nature the most difficult to get and to put into perspective: the informal relationships which modify every contact in an organization are the ultimate determinants of the organization's nature and efficiency and are at the same time its most intimate aspect. Those intimately concerned feel strongly and apprehensively about them. Even eager welcome of outside assistance is likely to be mixed, during the actual investigation, with reserve and often with an inclination to draw the observer away from significant problems to areas of less importance.
2. The chief research tool is direct description. Among the innumerable facts which he might describe and examine, the observer must be able to distinguish the crucial and significant, to differentiate between symptomatic and causal aspects of facts, to recognize the

situation where "treatment" has led only to the substitution of one symptom for another. This choice operates inevitably from the beginning of a research contact and has an important bearing on the progress and significance of the research. In short, between a social situation and the crudest description or measurement of it, there is always the perception and insight of the observer. Therefore, agreement on the framework of concepts and research methods to guide observation is essential for using and comparing findings from different studies.

3. The presence of the research worker and the process of measuring directly affect the relationships he sees and is told about. His skill determines the extent of this effect and the accuracy with which he can take account of it.
4. Research situations in social studies cannot be duplicated at will: an organization is permanently altered by each experience. There is much less scope than there is in the natural sciences for trial and error experimenting, and error is likely to do serious damage.

Therefore, research method—whether it be formal research or purely informal—should be essentially permissive, i.e. receptive rather than detective. Moreover observation, as opposed to questioning, is essential because social behaviour is largely intuitive and many people cannot describe social situations with any accuracy.

VI. CONCLUSION

In Chapter I, "The Discords of Industrial Society", it was doubted whether the discords were inevitable. Subsequent chapters have suggested that they are not. Without pretending to final certainty, the purpose of this book has been to show reason for believing that industry can play a major role in maintaining existing communities and in fostering the growth of new communities.

This belief has in fact been confirmed whenever the discords have been strident enough to demand analysis. One such condition is war itself—the most extreme form of social breakdown: "The spectacle of Europe, erstwhile mother of culture, torn from end to end by strife that she can by no means resolve, should give pause to the most 'practically-minded', should make such persons ask what type of research is likely to be most practically useful at the moment. . . . How can humanity's capacity for spontaneous co-operation be restored? It is in this area that leadership is most required, a leadership that has nothing to do with political 'isms' or eloquent speeches. What is wanted is knowledge, a type of knowledge that has escaped us in 200 years of prosperous development. How to substitute human responsibility for futile strife and hatreds—this is one of the most important researches of our time."[1]

Another condition of obvious and serious discord is produced by sudden changes in circumstances, when intuitive skills and attitudes are quite incapable of adjusting at sufficient speed. The pressures engendered by war for instance, "tend to make emergencies of what might otherwise have been merely low-grade co-operation".[2] The 10,000 unofficial war-time strikes in the United States, despite a universal pledge not to strike; the selection and training of large numbers of new pilots; the relocation of the Japanese from the west coast of the United States; the recruitment of millions of workers into war plants; the unprecedented problems raised by the air-raids on

[1] Mayo, Introduction to *Management and the Worker*, op. cit., p. xiv.
[2] Jerome F. Scott and George C. Homans, "Reflections on the Wildcat Strikes", *American Sociological Review*, XII, No. 3, June 1947.

Britain—all demanded special study in the absence of relevant previous experience. And many studies led to successful adaptation.

Wherever, in short, established communities are broken up or new ones fail to grow, there is room for new social skills. The United States, composed of more heterogeneous communities and also less bound by tradition than Europe, has naturally been the first to feel the need and to react. There the "cake of custom" had never been as solidly formed as in the other countries. Now the "cake" is broken in Europe and, with the industrialization of "undeveloped areas", it is breaking in Asia, South America, Eastern Europe and elsewhere. We are, then, faced with an even greater need, both quantitatively and qualitatively, for systematic, explicit methods of solving new problems and communicating and integrating the necessary skills.

How far is this need recognized? What signs are there of our ability to meet it? Not many, perhaps. But even the smallest indications of gain are of crucial significance. And there are several of these.

In the first place, working conditions have greatly improved, greater provision is made for social welfare, and an increasing number of firms have personnel officers and have set up machinery for formal joint consultation. At the very least these changes indicate an increased awareness that the production of commodities depends on people, and not merely on machines. And often they mark the recognition that industry's business is not economic only, that it needs to function also as an effective social institution.

More significant is the heart-searching about organizational size and structure. Efficiency is no longer seen almost as a function of size. On the contrary, even in industries most favourably disposed to mass production, there is a tendency to limit the size of each production unit. This change is defended essentially in social terms: large units are "impersonal", are "unable to provide effective incentives", put "excessive strain on administrators", and are hence often inefficient. Again, where ownership is divorced from management—that is, over a wide field of modern industry—the position of management is changing significantly. Mr. Owen D. Young of the General Electric Company has described this alteration: "Managers are no longer attorneys for stockholders; they are becoming trustees of an institution; now that is a great change." At the same time, there are many attempts to make managers and other employees part owners of many enterprises.

Underlying these features, and most significant, is the change from implicit to explicit evaluation of human affairs. Formerly the inexorable processes of history rendered final judgments. In time, they forced ineffective social institutions into reform or oblivion. Explicit conscious evaluation is a more modern phenomenon. The processes of history are too slow for the pace of events in modern industrial society.

Economic criteria of evaluation were the first to be made explicit. They seemed clear-cut and precise, and, at first, also comprehensive. Was it profitable, i.e., did material wealth accrue? Society judged the activities of owners, workers, managers, according to their earnings. From the very first this involved many difficulties, and it has become clear that the precision of economic evaluation is largely illusory—"misplaced concreteness". For instance, in comparing the efficiency of two firms, some more or less hypothetical allowances have to be made for such complex factors as the firms' geographical positions in relation to raw materials, labour, and sales outlets; their "good will" with customers and suppliers; their "going value"; their future prospects. Nationalization and assessments of war damage have recently provided much evidence of the difficulties of finding proper bases for evaluating an industrial unit even from a solely economic standpoint.

Again, the range of human activity subject to more or less strict economic evaluation has steadily contracted. It never was as wide as might have been gathered from the writings of the eighteenth and nineteenth centuries. Since then, many more rigidities have grown into the modern industrial system which, the less competitive the system became, circumscribed ever more narrowly the value of economic comparisons. Some rigidities have waxed strong in direct opposition to the outcome of economic evaluation, e.g. many rules of trade unions and trade associations. Others are associated with the increasing size of organizations in which it is difficult to compare the profitability of constituent units, and consequential action is in any case restricted. Other rigidities again are the immediate results of deliberate decisions to brush economic criteria aside in favour of wider provision of social security or defence. So that the operation of economic evaluation is further retarded or altogether prevented by subsidies, controls, and an evergrowing range of other means, all designed to ensure that the survival of institutions does not depend on their economic efficiency alone. These forces interact. Over a wide field, economic evaluation operates only by fits and starts and is no longer regarded as the only, or the final, arbiter.

At the same time, criteria for more balanced evaluation have been developed and already find wide application. Sometimes they have supplanted economic criteria. The needs of defence, subsidies and controls imply evaluation by standards other than economic. More usually, economic evaluation has been widened into socio-economic evaluation. For instance, the advantages of diversifying local industry and reducing the incidence of fluctuations in trade or employment are taken into account in industrial location. Where increased social security is embodied in official policy, the trend towards socio-economic evaluation has been greatly hastened.

Within industries and within industrial organizations, indices are being developed to record productivity, absenteeism, labour turnover,

accidents, sickness, strikes, and other measures of social effectiveness. Already many of these factors can be measured as accurately as earnings and can be as usefully interpreted. More important is their use together. Schemes are being developed which make the worker's wages dependent not merely on his output, but also on his contributions to safety, cleanliness, social activities and morale in general. The socially effective organizations studied in this volume use them all, social as well as economic criteria, to evaluate progress and to guide policy.[1]

Finally, the realization is growing that the record of industrial organizations as social institutions closely concerns other organizations also and the community in general. When productive efficiency falls short of the potential, as is generally held to be the case in most enterprises, this is regarded as of importance in the community and at national and even international levels. The contribution an industrial organization makes in terms of lowering or raising the already colossal cost of mental and social maladjustment is worthy of recognition. It has been held that the most reliable soldiers come from the farms. However that may be, the point is clear enough. It is, in short, that the economic activities of man are known to contribute not merely to his material well-being but also to his growth as a person; that these purposes can go together effectively; and that those organizations are socially valuable which interpret their function thus widely—enable their members to distinguish good from bad taste as well as to sell, to acquire social skills as well as material wealth, to find faith in the future through satisfactions in the present.

The descriptions of organizations in this volume were intended as demonstrations of how industry can help in developing men and communities as well as producing commodities. Many more demonstrations are needed. Public and semi-public corporations, co-operating with trade unions, may reasonably be expected to take the initiative in such demonstrations. These organizations are specifically kept in being for the general good, not only to make profits; they can importantly serve the general good by leading in experiments designed to find ways of contributing to community development.

DEMONSTRATION EXPERIMENTS

It has been demonstrated that, in comparison with the conception of an "experiment" in the physical and natural sciences, experiments in social science are inexact (Chapter V). Nevertheless, attempts to contrive new forms of organizational relationships and to achieve closer integration of industry and community, play an invaluable role

[1] For an example of the use of non-economic criteria of efficiency cf. J. B. Fox and J. F. Scotts, *Absenteeism: Management's Problem*, 1943, Boston, Massachusetts, Graduate School of Business Administration, Harvard University, Research Study No. 29.

in developing skills of administration. The Tennessee Valley Authority is an outstanding example.

Such "experiments" must necessarily be few: in the first place, because of the myriad permutations and combinations of human relationships that are possible—these permutations and combinations far exceed in number those of, say, the known chemical elements; few in the second place, because of the greater reluctance to try new forms and combinations of human relationships— a very natural reluctance, considering the issues and risks involved; few, again, because each "experiment" is immensely time-consuming and costly. A chemist in his laboratory may be able to try a dozen different combinations in an afternoon. The Hawthorne experiments in human relations consumed most of the time of a number of scientists for several years; and evaluation of effectiveness and efficiency in social experiments may be valid only after decades of operation.

These difficulties are additional to the methodological problems which were discussed at some length in Chapter V. Two in particular may bear reiteration here. First, human situations may be substantially affected and altered by the very fact of being observed. Attempts to describe and publicize social experiments while they are in the making may therefore lead to bad science.

Secondly, the costs of experiment cannot be strictly separated out from the costs of operation. To some extent, field research is a cost not only to the research body but also to the organization within which the research is done. Interviews, for instance, may take a man away from his work, and the mere presence of a research worker may to some extent disrupt operations—although such costs are minimized if the research is conducted carefully. Participation in experiment is based on what is essentially an act of faith: people spend time and other resources in the hope and possibility of eventual benefit.

It is perhaps chiefly because of these difficulties of conducting and recording major experiments, that most work in industrial sociology concerns itself with smaller case studies, such as those described in the present volume. This is sometimes criticized. Yet the value of such work is very great. Given a choice between, on the one hand, skimpy description of a large situation, or highly abstracted description of a number of situations, and, on the other hand, concrete detailed description of a smaller case—given the choice, the serious student of *industrial* sociology is wise to take the latter alternative. His generalizations are as yet too few and unorganized to justify sole, or even very great, reliance on thinly-spread data about a variety of situations. Enough complications and qualifications in the use of even such straightforward indices as absenteeism, strikes, monetary profits and labour turnover have been mentioned in previous chapters to establish the importance of this point.[1] Invariably the way to effectiveness in

[1] See Chapter V.

any branch of science has involved careful, thorough description of detailed and "obvious" facts.

Given all this, there is always a need for more experimental work, and it is perhaps the feeling of this need which is to be detected in impatience with activities in social science. People look for leadership. Natural reluctance to try new ideas tends to override even the felt pressure for change unless those pressures are made articulate and forceful through leadership. The Tennessee Valley experiment (TVA) is an example in point: the need was great, but it seemed to require the leadership of a Roosevelt to organize it. To mention Hitler's Germany as a warning against "leadership" clarifies the difference between the two cases: Hitler's leadership was dictatorship in the context of force; Roosevelt's leadership occurred in the context of democratic methods —both in the framing and in the execution of the idea. As one observer put it, TVA "had to manage on a shoestring of compulsion".

This very shoestring, this limitation on compulsion, is what makes TVA so valuable an experiment to us. The methods, for instance, of interesting backward farmers in the value of fertilizers and mechanization confirmed the findings of social science with regard to the nature and processes of successful communication and adaptation. Another large-scale experiment is going on in the Scottish coalfields, where transfers of miners from redundant to expanding areas have been attempted by means of consultation and participation rather than by social or economic force alone.

TVA has been made meaningful to all. Scotland's experiment, and others, ought some day to make a similar contribution. These modern efforts at adaptation fostered by the State can be thought of, in addition to their other functions, as demonstration experiments—even though circumstances may require that the demonstration take place after the experiment. Many organs can help in the demonstration, but it hinges on the skilled job of finding and recording the essential facts. The present volume is an example: its sponsors provided at once the means of finding and the means of disseminating some of the facts of modern industrial life.

CHECK-LIST FOR INDUSTRY AND FOR INDUSTRIALIZING COMMUNITIES

Chapter V outlined the process of generalization in research. Conclusions based on the present study are but hypotheses to guide observation in the next. These hypotheses are essential to the process of sorting out the significant from the endless amount of material that observation provides. (And hypotheses of some kind guide all observation, whether the observer is aware of it or not.) Previous research provided the guides for the studies described in the present volume; it is hoped that these studies will guide the work of others—not only researchers, but

also those responsible for industrial organization—whether it be in industrial communities or in communities that are just beginning to industrialize. If our conclusions do that, they will have served well.

Many particular and concrete statements in previous chapters were really, as was pointed out in Chapter V, in the nature of abstractions; that is, they were more than pure description. Nevertheless they were related to particular concrete situations and are meaningful only in their own contexts.

The process of abstraction may now be carried one stage further—to broaden the context of generalization, as it were—and some of the features which seemed to be common to groups of situations may be listed. The two unhealthy organizations, discussed in Chapter I, seemed to have the following features in common:

1. Absence of craft hierarchy and of a continuous process by which attitudes, customs and social skills are passed on.
2. Inadequate contact between various levels of the organization.
3. Inadequate contact between the industrial organization and its social environment.
4. Social sickness in the industrial organization and in its social environment.

The organizations, discussed in Chapters II and III, those which were efficient and healthy and either helped to maintain healthy communities (or to prevent their disintegration) or helped to create a sense of community in their social environment—these organizations seemed to share the following features:

1. Autonomous and responsible groups throughout the organization.
2. Spontaneous collaboration between groups.
3. Integration of informal and formal procedures and structures.
4. Close relationship between the industrial organization and its social environment.

It is possible to go further and generalize from each of these sets of four observations: *In the first group of organizations there were not, in the second group there were, adequate routine opportunities for meaningful, spontaneous, intimate human association at work.*

Essentially brief and simple as these observations are—and note that as abstraction is carried further they become yet more brief and simple—their application to concrete situations immediately suggests their practical significance. For instance, the fourth feature characteristic of healthy, efficient organizations, i.e., "close relationship between the industrial organization and its social environment", implies such particular facts as that members of management must be real, functioning members of the community as well as of the factory. Again, all the observations imply that each individual and each group in the factory or office must have real responsibilities around which to collaborate, if the organization and the community are to remain healthy social units. This suggests that an industrializing community,

for instance, must be actively and responsibly participant in its own industrialization: the process cannot be carried on from outside or by outsiders alone without disintegrative effects on the community.

Thus applied, our list of observations can be a useful guide for those who would assist the growth of a sense of belonging in other industrial organizations in other communities. And it may help them to develop yet further the criteria of social health in industrial civilization.

FUTURE OR FANCY?

It is possible, and perhaps also profitable in this final section, to visualize some of the results of the further development of social understanding in general, and of the operation of industrial organizations as social institutions in particular. The results are of course closely interwoven, and it is possible to do no more than focus attention now on one, now on another aspect of the web of human affairs. For instance:

1. It would seem reasonable to expect that attention to the community factor in industry would result in many individuals finding the security and stability which they now lack; and that this change would greatly reduce neurotic and anti-social behaviour. Much psychosomatic illness is traceable to industrial situations.
2. It would seem reasonable to expect responsibility to be increasingly diffused through an organization, community, region, nation, leading to more equal sharing of its burdens and satisfactions. The growing tendency of society to consist of a few at the centre with too much to do, and many at the periphery with no community responsibilities, might be revised.
3. It would seem reasonable to expect that a balance and integration of social classes and economic interests would replace the cycle of domination of society by successive groups. There would still be conflicts of interests to be reconciled, as in any democracy, but they would be manageable.
4. It would seem reasonable to expect the production of greater wealth through the proven effects of spontaneous co-operation. It is only in an integrated community that the various interests, e.g., trade unions and management, can co-operate around the fundamental principle that wealth is increased only through increased productivity, not through strife.
5. It would seem reasonable to expect our capacity to communicate with others to develop greatly, rendering it easier to adapt to changes of all sorts, since we should have roots in communities and daily practice of effective communication and adaptation. In this sense, responsible membership of a real community is training for living in the community of the world.

6. It would seem reasonable to expect status systems to develop attuned to the needs of the times, in which regional and national leaders would be thrown up by really representative institutions. In this way, community could co-operate with community, region with region, and national policies could be evolved and continuously adapted. The problem of finding the best leaders can only be solved in community experience, not by the ballot box alone.
7. It would seem reasonable to expect the growth of many spontaneous and autonomous arrangements between effective social institutions and between communities; and to expect that these would replace many uniform national policies which were born of the failures of institutions and communities and now hinder their growth.
8. It would seem reasonable to expect that the recognition of natural communities would result also in the growth of spontaneous arrangements between institutions and communities in different countries, blurring frontiers and entailing more significant international co-operation.

Trends such as these could be expected to result from making work part of life, a reintegration of industry and community.

INDEX

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