C O N T E N T S.

Dhananjayarao Gadgil Library
GIPE-PUNE-010374

1. Social Economic Pla Union of Soviet S Republics. Report tion from the U.S.S.R. to the World Social Economic Congress, Amsterdam, August 23-29, 1931. By V.V.Obolensky-Ossinsky, S.L. Komin, A.Gayster and I.A. Kraval. 1931. pp.100.

2. Employment and Unemployment in Pre-war and Soviet Russia. Report submitted to the World Social Economic Congress, Amsterdam, August 23-29, 1931. By Susan M. Kingsbury and Hilrec Fairchild. 1932. pp.122.

3. National Organisation and Industrial Relations. A Symposium of Views from Management, Labour and the Social Sciences. 1932. pp.270.

10374

CONTENTS.

Gokhale Institute of Politics and Economics Gokhale Library
GIPE-PUNE-010374

1. Social Economic Planning in the Union of Soviet Socialist Republics. Report submitted to the U.S.S.R. to the World Social Economic Congress, Amsterdam, August 22-29, 1931. By V.V. Obolensky-Ossinsky, S.I. Kovner, A. Geyster and I.I. Kraval. 1931. 338 947 pp.11cc.

2. Employment and Unemployment in Pre-war U.S.S.R. Report submitted to the World Social Economic Congress, Amsterdam, August 22-29, 1931. By Susan P. Kingsbury and Mildred Fairchild. 1931. 331-1 947 pp.10cc.

3. Industrial Organization and Industrial Regulation. A Symposium of Views from Management, Labour and the Social Sciences. 1932. 331-1 pp.27c.

Reviewed
20.10.32

This Report has been printed by the firm of "De Eendracht", Schiedam, Holland, where the principle of cooperation between workers (including management) and customers is given practical effect. Capital is intended to serve Labour and its remuneration is limited to 6% or 7%. All further profit goes to the workers and to the customers, who possess 99% of the shares. The business has been established since 1897 and its affairs are conducted to the entire satisfaction of all concerned.

SOCIAL ECONOMIC PLANNING IN THE UNION OF SOVIET SOCIALIST REPUBLICS

REPORT OF DELEGATION FROM THE U. S. S. R. TO THE WORLD SOCIAL ECONOMIC CONGRESS AMSTERDAM AUGUST 23-29 1931

V. V. OBOLENSKY-OSSINSKY
S. L. RONIN
A. GAYSTER
I. A. KRAVAL

ADVANCE PRINT TAKEN FROM FINAL CONGRESS PUBLICATION ISSUED BY THE INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION (I. R. I.), THE HAGUE, HOLLAND - OFFICE OF VICE-PRESIDENT IN U.S.A. ROOM 600, 130 EAST 22D ST. NEW YORK

PREFACE.

Social economic planning as a method to be examined in the light of such experience as already exists, rather than as a proposal to be debated, was the subject of the World Social Economic Congress held in Amsterdam, Holland, August 23-29, 1931, under the auspices of the International Industrial Relations Association (I. R. I.) * The theme was further described in the full wording of the topic on the program as Social Economic Planning - The Necessity for the Planned Adjustment of Productive Capacity and Standards of Living. The report on social economic planning in the Soviet Union which is here issued as part of the material available in advance of the full publications, is a new printing of the pamphlet which was brought to the Congress and orally presented at the session on Experience in National Planning by the delegation of economists and representatives of planning institutions in the U. S. S. R. Its full significance will be better understood if its place in the Congress program as a whole be indicated.

Taking as its starting point The Paradox - Unemployment in the Midst of Economic Progress, the congress had before it statistical analyses of fluctuations in employment and unemployment from 1910 to 1930 in the United States, Canada, Australia, Great Britain, France, Germany and the Soviet Union, with notes on the industrial situation in China. [1] The other side of the paradox was pictured in statistics of the world's productive capacity during the same period. [2] These economic

* Address of Secretariat: 66 Javastraat, The Hague.

[1] The economists making these studies were Dr. F. C. Benham, of the London School of Economics and Political Science, who wrote the reports on Great Britain, France and Australia; Dr. W. A. Berridge, of the Metropolitan Life Insurance Company, New York, who reported on the United States and Canada; Dr. Susan M. Kingsbury and Dr. Mildred Fairchild, Bryn Mawr College, Pennsylvania, who reported on the Soviet Union; L. K. Tao and S. H. Lin, of the Institute of Social Research, Peiping, who prepared the report on China; and Dr. Robert Wilbrandt, Technische Hochschule, Dresden, who reported on Germany. These reports were interpreted for the congress at the opening session by Dr. Max Lazard, Paris.

[2] By Dr. Otto Neurath, Director, Social Economic Museum, Vienna.

analyses revealed for all these countries recurrent unemployment, with the present situation characterized as the deepest depression in the period reviewed and indeed the most severe on record, except in the Soviet Union where the problem was shown to be shortage of labor, not unemployment. Even there, however, it was clear that standards of living, through shown to be improving, are far below what is desired. In other countries, such as the United States, where a higher standard of living has been attained, its insecurity, especially through prolonged periods of unemployment, is the characteristic problem. Thus the raising and the maintenance of standards of living in proportion to the increase in productive capacity was shown by these preliminary studies to be the vital social problem before modern industry today in all lands.

For all countries, indeed, the facts of the present situation reveal not merely a negative problem of how to escape from unemployment, but a larger task of economic organization, namely, how to balance productive capacity and purchasing power so that the goods and services of modern industry will be utilized. In other words, modern industry's own potentialities, growing out of the enormous development of technology involved in power as the basis of industrial mechanization, have created for the whole network of industry the problem of broadening the base of consumption. In other words, the question is: How can standards of living be raised in proportion to industry's growing productivity?

The idea which constituted the subject of the Congress is that this task of achieving balance between productive capacity and purchasing power or standards of living is to be accomplished by social economic planning, defined as a method of attaining balance between production and consumption by a rational integration of all branches of economic life. The significance of the word "social" is in its implication that the objective of this economic planning is the social task of raising standards of living.

The sessions of the Congress were set up under the following main heads: [3]

I. THE PRESENT PARADOX—UNEMPLOYMENT IN THE MIDST OF ECONOMIC PROGRESS

II. PRINCIPLES AND PRACTICABILITY OF ECONOMIC PLANNING
1. Principles and practice of Scientific Management: United States.
2. Principles and practice of Scientific Management: Europe.
3. The Problem of Planned Economy.

III. EXPERIENCE IN NATIONAL ECONOMIC PLANNING
a. Agricultural. b. Industrial.
Here was presented the report on Social Economic Planning in the U. S. S. R.

IV. NECESSITY AND MEANS FOR INTERNATIONAL ECONOMIC PLANNING
1. International Planning by Industries.
2. Mass Distribution and Higher Standards of Living.
3. The Functioning of the International Financial System in the Economic World.
4. Economic Service of the League of Nations.
5. Experience and Potentialities in International Economic Treaties.

V. STANDARDS OF LIVING—THE RESULTANT OF PRODUCTIVE CAPACITY AND BUYING POWER
1. International Agreement on Labor Standards.
2. Economic Policy of the International Labor Movement.

VI. ROUND TABLE CONFERENCE ON THE WORKSHOP
1. The starting point of discussion was the Industrial Employment Code in process of formulation by a committee of the Taylor Society, New York. As part of the discussion a paper was read by title on Human

[3] See full program with names of participants, reprinted in appendix, p. 161.

Relations in the Electrical Industry in the United States and Canada.

2. The workshop as a unit in planning under different national systems (with general discussion by congress members from different countries).

VII. THE NECESSITY FOR WORLD SOCIAL ECONOMIC PLANNING—A SUMMARY OF THE PROCEEDINGS.

Thus having analyzed the facts of the present situation in order to define the problem - the Paradox - the programmakers sought for a record of experience bearing on planning in two main directions - in the principles, methods and practices of scientific management in the country of its origin, the United States, and on a national scale in the only country which so far has definitely undertaken the task of planning its total economy, the Union of Soviet Socialist Republics.

Scientific management was described as "a great stabilizing force". Stability, however, is not necessarily static, but may be conceived as "a state of moving equilibrium, like a ship at sea; regulated and ordered progress". This equilibrium is to be reached and constantly maintained by the continuous application "of the basic principles of research and standardization" whereby management "discovers, reconstructs, defines and co-ordinates the factors of a managerial situation, brings them under co-operative control, and thereby establishes relative stability." [4]

Historically, these principles have been developed and applied first in the small unit of a workplace, then to the workshop and later to extended individual enterprises. The extension has been a natural growth, due to the necessity of taking account of all the factors affecting stability. But thus far scientific management has been limited to enterprises having homogeneous control or ownership. Its principles, however,

[4] Person, H. S., Principles and Practice of Scientific Management, p. 6. Printed for the 1931 World Social Economic Congress by the International Industrial Relations Association.

namely research, standardization, control and co-operation, are available for use over a wider area. "But," said Dr. Person,

"there remains the inevitable question: Can society adapt this technique to the management of its industry on a still larger scale - collectively - at the same time preserving the values of individual initiative and self-expression as they have been heretofore preserved in the onward march of scientific management?" [5]

This question was further elaborated out of the experience of scientific management in Europe. Could these principles be made world-wide in their application? Further, could they be worked out contemporaneously in two systems, the capitalist system of the Western world and the communist system of the U. S. S. R.?

The companion paper to these two, on The Problem of Planned Economy, came to the conclusion that

"economic planning is a practicable method of economic guidance. Without passing judgment on the performance in the Soviet Union and allowing for the conditions which simplify the Soviet problem, the operation of the Five-Year Plan has gone far enough to prove the feasibility of the method in its particular Soviet form. Whether it could also work under a different set of institutions still has to be proved but there is a basis for a favorable presumption. It is based on the growing technique of statistical determination of both demand and resources, on the increasing concentration of directive authority today, on the effectiveness of our methods for organizing public opinion, and on increasing insight into the nature and process of machine economy." [6]

At this point in the program the report on Social Economic Planning in the U. S. S. R. was presented under the title: Experience in National Planning. It will be seen that at the outset this report took the ground that planning as envisaged in the Soviet Union is a comprehensive program of production and consumption possible only in a society which has socialized the ownership of the means of production. Indeed, the opening section of the report which is here issued denies the possibility of planning where private ownership

[5] Ibid., p. 39.

[6] Lorwin, Lewis L., The Problem of Economic Planning, p. 30. Printed for the 1931 World Social Economic Congress by the International Industrial Relations Association.

prevails in a capitalist system. If for the moment this problem of control and ownership be ignored - though recognized as a fundamental point of difference - the report on methods of planning in the Soviet Union may be read as a "case" of scientific management applied to the economic life of a nation as a whole.

That the spokesmen for the Soviet Union were qualified by experience to speak on planning is shown in the list of the delegation:

Valery V. Obolensky-Ossinsky, head of the Soviet delegation to the World Economic Congress called by the League of Nations in 1927; formerly President of the Central Statistical Board of the U. S. S. R. (which is now incorporated in the Gosplan); member of the Institute for Economic Research of the Gosplan; and now engaged chiefly in individual scientific and literary work.

Solomon Ronin, member of the Institute for Economic Research and of the State Planning Commission (Gosplan); for which he is expert on questions of industrial planning and of financing.

Aron Gayster, Vice-President of the Agricultural Academy of the U. S. S. R. and member of the State Planning Commission; delegate at the International Conference of Agricultural Economists at Cornell University, Ithaca, New York, in 1930.

Ivan Kraval, Director of the Labor Research Institute and assistant in the Commissariat of Labor; an authority on labor questions in connection with planned economy.

Alexander Cohn, Director of the Institute for Foreign Trade; concerned particularly with problems of international economic relations.

It will be noted that the report on the Soviet Union is composed of four sections, each prepared by the delegate most competent to speak on that subject: (1) The Premises, Nature and Forms of Social Economic Planning, by Mr. Ossinsky, assisted by the staff of the Institute for Economic Research of the Gosplan; (2) Planned Economy in Operation, by Mr. Ronin, with the same assistance; (3) The Planning and Development of Agriculture, by Mr. Gayster; (4) Labor in the Soviet Planned Economy, by Mr. Kraval. The fifth member of the delegation, Mr. Cohn, did not prepare a written report in advance, but took part in the discussion, especially on questions related to international commerce and finance.

These reports will best speak for themselves. But having in mind the emphasis given to certain points in them through discussion at the Congress, it may be useful here briefly to stress certain aspects which are particularly significant.

First, it may be said that the Five-Year Plan is not the whole of Russian planning, nor is planning itself the whole of communism. Indeed, communism as envisaged in Russia has not yet taken final form, but rather is in process of becoming - an organism developing, as the Russians believe, from historical necessity. In its development, social economic planning is the process of administering socialized production to achieve a given aim. The leading aim or social purpose is determined by the Communist Party and the government; it is defined in Mr. Ossinsky's report as "the general aim of constructing a socialist society on the basis of the maximum development of productive forces and the systematic improvement of the material conditions of the workers." (p. 58) This general aim is then redefined in terms of a leading aim for each period - five years or one year or one month or even five days, according to the unit and period of planning which is being worked out.

The second point which is important to note is the methodological principle implied in the word "balance". The significance of this word in economic life is being given a new content by the development of the technique of planning in Russia. Mr. Ossinsky said: "the method of balancing, subordinated to the leading aim of the plan, is the fundamental method of social economic planning." (p. 62.) Balance works itself out as between demand and supply of the chief consumption goods, as between factors in production such as grain and fodder, raw materials, fuels, metals, construction materials, equipment and labor and, finally, the balance of the unified financial plan.

It has been said that the Soviet Union is independent of such conditions as are involved in price-setting in capitalist countries.

But in answer to this suggestion this report emphasizes the absolute necessity of what is called the "business basis" of planning. The report on The Nature and Forms of Social Economic Planning declares that

> "the socialist business basis is the foundation of the plan and the lever for its accomplishment. It is a great mistake to believe that adherence to the business basis, i.e., aspiring to attain the greatest possible economic results for the least expenditure, is characteristic only of private capitalist economy. The socialist business basis differs essentially from the capitalist business basis, but it is a feature of socialist economy as it is of every rational economy." (p. 27.)

Finally, attention may be called to the impression made by these reports as a whole, namely, that the plan is not merely an array of figures on paper, but a living process in which the figures are merely the record, and they are subject to change as day-to-day developments translate them into reality. As the report of the Soviet delegation points out: "all the work of planning is so constructed that it combines the concentrated will and aim of the working class organized as a whole with the local initiative of masses of workers in each subordinate economic unit." (p. 58.) It is safe to say that the methods of planning in force today could not even have been predicted in their detail fourteen years ago. Technique has developed with growing experience and it changes as industrialization proceeds.

The report of Mr. Kraval, representative of Russian labor, illustrates this point in that it shows the development of workers' participation in planning, which was not included in the original technique of planning. He says: "These means for maintaining workers' discipline are possible in the Soviet Union because the workers themselves are the organizers of production." (p. 129.) Speaking at the congress, Mr. Kraval pointed out that forced labor can exist only when one man exploits another. But if you are your own master, "force is the same as though you were riding on yourself". Nevertheless, accepting this theory of workers' control through

ownership has not been the last word in Russian experience. It is another evidence of the point just made that experience in planning in Russia is the realization of an idea. In the actual methods of planning itself, counter planning has been put forward to give the individual his place. Mr. Kraval's report again says:

"The most important problem of socialist competition has been to get the industrial-financial plan individualized for every department, every worker, every machine in the factory. It was necessary not only that the working class as a whole should direct industry but that every individual worker should understand his part in the total scheme of production and the connection between his own work and that of other workers in the same or allied branches of industry. It was only when that stage had been reached that we were able to achieve results whereby the workers, utilizing all the internal possibilities and resources of the plant, could play a decisive role in the drafting and execution of the production plan." (p. 128.)

In the course of discussion at the Congress many questions were raised by members from other countries. The wish was expressed that greater emphasis had been laid upon mistakes and defects in planning, since these are a valuable part of any experience. The delegates from the Soviet Union replied that study of mistakes and defects is a constant process in the plan, but that on this occasion they were seeking to present the positive, constructive aims of the Soviet system, rather than the difficulties, which they were ready to say had been very great. In fact, it was shown that the whole system had been built up through continuous sacrifice and with tremendous effort. After fourteen years the task is not finished, but the basis of the system is not regarded as an experiment.

The great need now, in the opinion of the delegates from Russia, is that those outside of Russia should understand the new system. Through such understanding, they declare, the peaceful co-existence of the two systems becomes possible. Moreover, such understanding is vital to the preservation of peace and the welfare of humanity.

PREFACE

The Congress did not end with the presentation of Russian experience. As the program shows, subsequent sessions dealt with the international organization of industries, the international finance system, and the governmental organizations for international co-operation, particularly the League of Nations and the International Labour Organization. This is not the place, however, to sum up the discussions along these lines. The purpose here is to introduce these reports on experience in national planning in the Soviet Union. The Amsterdam Congress was the first occasion when representatives of the Soviet Union have come out of Russia to give to the Western world their account of the actual methods of planning as part of the Soviet system. The materials which they prepared for the Congress, interesting as they are, must be regarded merely as a beginning of the full record which ought to be made available for other countries on the increasingly substantial experience of the Soviet Union in social economic planning.

The aim, then, in publishing this material for American readers is twofold: first, to contribute to a clearer understanding of the new system of a nation covering one-sixth of the globe, with potentialities of far-reaching importance in the world's commerce; and second, to make these reports available in the United States for those who wish to be informed of the Russian experience in its bearing upon the problems involved in attaining a balance between production and consumption. The facts brought together in the program of the 1931 World Social Economic Congress indicate that this problem of balance requires the working out of methods for remedying the insecurity and inadequacy of standards of living as a task both for national action and for international co-operation.

New York, November 1st 1931.

MARY VAN KLEECK.
Chairman, Program Committee,
1931 World Social Economic Congress.
Vice-President in the United States of the
International Industrial Relations Association.

THE NATURE AND FORMS OF SOCIAL ECONOMIC PLANNING*

BY V. V. OBOLENSKY-OSSINSKY, FORMERLY PRESIDENT OF THE CENTRAL STATISTICAL BOARD** OF THE U.S.S.R.; MEMBER OF THE INSTITUTE FOR ECONOMIC RESEARCH OF THE STATE PLANNING COMMISSION (GOSPLAN), MOSCOW

THE CRISIS OF CAPITALISM.

The capitalist world is now passing through the greatest crisis that it has ever experienced. The crisis is the greatest both as regards depth and acuteness, because of its world-wide character and long duration. So far there have been no signs of improvement. Typical features of this crisis have been: the reduction of industrial production in the leading countries by tens of per cent; unemployment involving tens of millions of people; an acute agrarian crisis caused by the drop in the price of wheat to half its pre-war price; the fall in the price of cotton to a price less than one-third of that prevailing in the period of "prosperity"; the catastrophic situation in the sugar and rubber markets; an enormous under-consumption and even starvation among the working people in town and country. At the same time efforts are being made (typical of capitalist "national" economy) to get rid of over-production by destroying "surplus" sources of production and goods, such as the stopping of oil wells, the restriction of sugar-growing, etc. The United States Farm Board has even proposed to destroy one-third of that country's cotton crop. Quite recently the crisis has manifested itself in the collapse of several important financial key positions of monopolist capitalism (the failure of the Danat Bank in Germany and of the concerns connected with it). These failures threaten the collapse of the German economic system. They have given rise to a credit crisis and an incipient instability of currencies that are spreading all over Europe. The crisis is such that it is no longer the opponents of capitalism but its leaders and advocates who raise doubts about the very existence of the system. They are busy searching for ways out of the crisis and are discussing various correctives for the capitalist system.

* The author of this report was assisted in his work by the staff of the Institute for Economic Research of the State Planning Commission, (Gosplan), Moscow.

** This is now incorporated in the Gosplan.

Meanwhile, in the only country in the world with a socialist system of economy - Union Soviet Socialist Republics - there has been a rapid growth of production, not only in 1930 but also in the first half of 1931. The partial difficulties that have been experienced so far have been difficulties of growth. The most characteristic of these difficulties is the shortage in the supply of labor, to use a capitalist term, a phenomenon just the reverse of unemployment. The increase in the area under cultivation for the year 1931, amounting to 23,465,000 acres; the doubling of the area under cotton; the rapid development of cattle-breeding and State and collective farms, which are taking the place of the disappearing kulak farms; the increased haul of fish; the expansion of production in the textile industry; all these are regarded in the Soviet Union, not as an economic calamity, but as a basis for increasing consumption by the workers, as a basis for improving their economic conditions. It is not surprising, therefore, that the question of gradually abolishing "rationed distribution" and food cards, of which so much has been written abroad by the enemies of the Soviet Union, should have been seriously discussed in the middle of this year. Nor is it surprising that the representatives of the U.S. S. R. at the world grain conference could under no circumstances agree to the American proposal to reduce the production of grain in order to "balance" supply and demand.

Apart from utterly superficial explanations of the world crisis of capitalism, the champions of capitalism now advance two reasons for the crisis: (1) lack of coordination - anarchy - in economic processes, and (2) a deep divergence between the movement of production and the movement of the purchasing capacity of the masses, who constitute the bulk of the consumers. Contrasted with the living example of the Soviet Union, these contradictions of capitalism stand out in particularly striking fashion. And, inasmuch as the absence of these contradictions in the Soviet Union is obviously due to social economic planning, the idea is spreading of borrowing this method of "planning" from the Soviet Union and transplanting it in an environment of capitalist economy. This, however, is to be done without replacing the fundamental foundations of the capitalist economic

system by socialist foundations, upon which in fact this planning is based and from which it has practically grown and which have assured its well-known successes.

Anarchy in production and in the circulation of commodities, finance, etc., and the divergence between producing and purchasing capacity are not isolated phenomena. They cannot be removed separately, while the whole complex of conditions which for the past hundred years has inevitably and constantly given rise to these, with increasing force, is preserved. This complex of conditions is the capitalist mode of production, the principal features of which are: the private ownership of the means of production, the social division of labor, and the contrast between town and country to which this gives rise. Relations between economic units are established by the operation of the law of market value. At a certain level of development the means of production are concentrated in big enterprises; the means of production are transformed into capital and capital goods, the property of the capitalist class; the masses of immediate producers are converted into a class of proletarians, whose only property - their labor power - is a commodity, the price of which is determined by the cost of its reproduction. A considerable intermediate group of small "independent" producers is preserved, mainly in agriculture; these are oppressed by the rule of capital, by landowners living on rent, by commercial "middlemen", and by various other parasitic groups. Profit and the increase of capital are the basic motive powers of economic - technical development. The capitalist strives, on the one hand, to reduce the price of commodity labor power to a minimum, and, on the other hand, to get the utmost surplus value out of it. At the same time, the capitalists compete with each other in the widest market and try to sell their goods at the highest possible profit. In the process of the vertical and horizontal concentration of capital monopolistic combines are formed. Industrial and merchant capital gradually become grafted upon finance capital. This, however, does not abolish competition between groups of capitalists and various branches of industry, but gives it enormous concentration and terrific force. The struggle for markets, for spheres of influence for the investment

of capital, and for cheap raw materials is transferred to the world arena. Monopolist groups in control of state power (the competing imperialist groups) contend with each other for the partition of the world and for the control of as many dependent colonial territories as possible. The competitive struggle and the pressure brought to bear upon labor power, the small producers, etc., is transferred in a different form, but with greater force, to the arena of world-wide relations. This not only gives rise to world-wide economic cataclysms but also to wars between the rival imperialist powers, to colonial expeditions and uprisings, to an ever-increasing oppression of colonials, to the growth of armaments, etc.

The existence of such an integral and inherently inter-connected complex of relations is a real fact. Its manifestations are common knowledge; these include the World War and the "peace" which followed it and created a whole new system of oppressing and oppressed states and nations, the great world crisis of 1920-21, the present world crisis, a whole series of revolutions, including the socialist revolution in Russia, and the preparations of the imperialist groups for a new war. Events during the last fifteen years have clearly demonstrated that material interests in the form of class interests are the driving forces of world history. They have shown that the struggle for these interests has in no way abated but, on the contrary, has assumed a hitherto unparallelled intensity, scope and acuteness, and that the imperialist groups who possess all the economic resources, all the instruments of violence of the modern state, as well as the powerful ideological weapons of science, the schools, the church, the press, etc., are prepared to go to any length, including even the mass extermination of human beings and the destruction of material and cultural values, in their fight to maintain and extend their rule of oppression.

Under such circumstances the attempts made to remove the two previously mentioned contradictions of the capitalist system and to introduce the principle of planning, fail to take into account economic, social, and political reality. These two contradictions are based on the existence of private property, economic classes,

and a bourgeois state power which protects private property. In Italy which has been proclaimed a "corporate state", a state where employers and workers are required to join syndicates and trade unions in their respective industries, where even a supreme economic council has been set up to regulate both production and the market, where the state generally interferes to a considerable extent in economic relations - there is the same condition of general over-production and divergence between production and effective demand that exist in all the "non-corporate states".

The "voluntary" introduction of the planning principle into the capitalist system (as proposed in the United States) by removing the restrictions on the formation of combines in separate industries, by forming planning and coordinating boards for each industry, and a central board to coordinate all industries, will, of course, also fail to achieve the avowed objects. But it will secure one unavowed object; namely, the repeal of the anti-trust law. Generally speaking, this system of branch or inter-branch "planning" agreements (which, in point of fact, establish quotas of production) will only strengthen the position of the big monopolist corporations. It will help to increase their pressure upon the interests of the workers and farmers. It will not abolish the competitive struggle of the employers or the under-consumption of the masses. It will only strengthen stock exchange speculation and the watering of capital stocks. It will neither decrease the imperialist aspirations of big capital nor will it avert crises. In Germany, where even before the war the organization of cartels both within separate industries and uniting allied industries was permitted by law, the present crisis is raging with particular force.

Still less feasible is the proposal to introduce planning on the basis of an agreement between classes, that is, to have a partial restriction of the rights of private property, to regulate prices and profits, to fix a standard of living for the workers, to introduce "annual" wages, and to submit capital issues to partial control. This is to be done with the aid of planning bodies, consisting of employers, workers, and representatives of science and technique, which are to have the right to investigate, to

control, and even, in extreme cases, to issue obligatory orders. Such is the proposal made by Dr. L. Lorwin (Washington) in a paper read at the World Social-Economic Congress on the problem of planning. His proposal is somewhat similar to those advanced by the European advocates of the theory of "organized capitalism".

The gigantic and complicated mechanism of modern economy can operate effectively only if: (1) the hundreds of thousands of capitalists and their agents, who are personally and materially interested in their own enterprises and who enjoy sufficient freedom to display "private initiative", automatically cooperate with each other; or (2) a single directing body is set up to exercise an all-pervading and complete control over the whole mechanism - or, at least, over the decisive part of it - in the initial stage. In the latter case, the leaders of this organization must be socially homogeneous. They must be guided by a common ideal, will, and aim. They must pursue "public" and not private interests. The old class type of "employer" must be replaced by an essentially different social type, possessing a different social education, different interests, social habits, and ideologies. As a rule, however, only the industrial workers can meet these necessary requirements. Therefore, it is not by mere chance that over 90 per cent of the managers of Soviet enterprises are Communist workers (the membership of the Communist Party is an extremely important factor in securing the necessary unity of social aim, will and action). What is required, moreover, is that the entire mass of workers - or at first at least the active majority - shall be absolutely devoted to planned social production and that they regard the industries as belonging to them. Only in this way can a highly complex social economic plan be drawn up and carried out successfully.

Instead of either of the above-mentioned economic alternatives, let us for a moment imagine a situation in which the incentives and the care and the initiative formerly displayed in business have broken down, although the former leaders of business have remained the same. We will assume further that the rights of these business leaders have been restricted, that a sort of

guardianship has been set up over them in the shape of a controlling body of mixed social composition, of different interests, and with different social psychologies. This is a planning and controlling body, but it will not be responsible for the management of the enterprises. Moreover, the environment which fosters bourgeois interests, habits, and ideologies, remains practically unchanged, while the masses of the workers have no particular social incentive to support planned economy, because they do not regard it as their own common cause. Such a hypothetical situation could only lead to: (1) constant friction and conflicts between the class groups represented on the planning bodies, all of which would hamper the working out of plans and obviously result in bad planning; (2) similar conflicts between individual employers, who would try to hinder the drawing up and the carrying out of proposed plans; (3) an enormous bureaucratization of management, both in form and in substance; (4) in some cases, indecision and much inertia on the part of the business leaders; (5) a great deal of insubordination to the planning decisions; (6) mass abuses, much peculation, and enormous graft; and finally (7) such a hampering and disruption of the economic processes that the situation would be equivalent to the worst of crises. To all this must be added the fact that one of the decisive prerequisites for the planning of a national economy is a centralized and unified control of the natural resources of the country (land, minerals, water-power, etc.). Lacking this, planning will be enormously hampered and, in the final analysis, futile.

However, all these assumptions are, of course, entirely hypothetical. It is altogether impossible to imagine that the employers who actually wield real power and force will allow themselves to be brushed aside in any such manner. Still less feasible are such proposals as a means for the rapid solution of the present acute crisis of the capitalist system. Even if such a proposal were formally adopted, as the Wilson proposal for a League of Nations was adopted, there would break out within the shell of this proposed scheme a struggle among the monopolist groups. Each group would only strive further to strengthen its own rule and control. At the same time, the psychological re-

sistance of the working masses would be weakened, for they would be led, of course, to expect great things from such a planning system. In reality, there is no danger of anything like this happening, because the proposal itself is so utterly impracticable.

Hence, in conclusion we can say that social economic planning is impossible under capitalism. Social economic planning is an inseparable feature of the socialist system of production. It can arise, develop, and be carried out only in a socialist scheme of things.

SOCIAL ECONOMIC PLANNING IN A SOCIALIST ECONOMY.

Socialism is a system of society in which all the means of production belong to society as a whole. This system is conceived in the womb of capitalism by the development of the material prerequisites for the socialization of industrial processes, by the growth of machine production, by the emergence of big enterprises, trusts, etc. The socialization of the means of production naturally signifies the abolition of classes and all class distinctions. *

Production is carried on for the purpose of satisfying the needs

* Dr. Lorwin advances the following argument against the possibility of a socialist abolition of classes. He says, "assuming that the class struggle alone is the dynamic factor in history would be fatal for socialism itself, for socialism means the abolition of classes, which would inevitably mean that there would be no further stimulus for further development". This objection is not new and can easily be refuted. The basic "dynamic factor" of social development is the development of productive forces, which determine industrial relations and, consequently, classes. Classes, class interests, and class ideology have repeatedly been radically changed in the course of historical development, e.g., the transition from feudal to bourgeois society. The development of productive forces within the womb of capitalist society leads to the actual socialization of the productive process and, at the same time, to a powerful growth of the new class which is to take the place of the bourgeoisie - the proletariat. The latter has no property or interests in property. The only class "ideal" it can have is the socialization of the means of production. This, moreover, coincides with the real interests of the overwhelming majority of the population. Socialization creates a real base for an entirely new (classless) system of society with new habits, psychologies and ideologies. It also creates new possibilities of incentive for development, as has already been concretely proved by the empirical experience of the Soviet Union.

of the separate members of society. It must also satisfy social needs, including, above all, the upkeep and development of the social apparatus of production.

From this there follows logically the necessity for an economic plan. Even under capitalism large enterprises with a large socialized labor process must have a plan which calculates expenditure, anticipates receipts in units of money, and coordinates all the productive processes. Under capitalism inter-enterprise planning is impossible but planning within certain given economic units is feasible. Under socialism the whole economy of the country becomes one huge single enterprise. Under this system the planning of the whole of the national economy is not only possible, but absolutely essential. It can be asserted that social economic planning is an essential prerequisite for the existence of socialist economy, just as anarchy of production and competition are the essential forms of existence for capitalist economy. For it is only by means of a plan that a unified social management of all the diverse enterprises, branches of industry, and spheres of economy can be correctly exercised, and only by means of a plan can contact and coordination be established between these enterprises. The anarchy of economic life disappears and its place is taken by a conscious determination of all the production processes - the plan.

Socialist business basis or economic accounting (khozraschrot) is the foundation of the plan and the instrument for its accomplishment. It is a great mistake to believe that adherence to a business basis, that is, the aspiration to attain the greatest possible economic results for the least expenditure, is characteristic only of private capitalist economy. Socialist business basis differs essentially from capitalist business basis, but business basis (or economic accounting) is a feature of socialist economy as indeed it is of every rational economy.

Unlike capitalist business basis, socialist business basis leads to the restriction or prohibition of the production and sale of certain commodities for which there may be a considerable demand but which public opinion regards as harmful and unnecessary. Remuneration of labor is not based on the minimum market price of labor as a commodity. The workers have become the

collective masters of their production, and are not the subjects of the economic process. In a word, labor ceases to be a commodity. "Wages" are fixed (allowance being made for differences in skill and the individual productivity of labor during the first period of development) by the simple estimation of requirements, available stock and resources. Under these circumstances labor-saving machinery is not introduced merely to cheapen production. The decisive factors may be the duration and arduousness of the work, the possibility of accelerating the tempo of work and of increasing the scale of production, etc. The essence of socialist business basis is that in general it must result in a considerable surplus. To each economic unit a certain rate of expenditure and result is assigned which must be fulfilled in the most efficacious way. The adoption of a business basis by each economic unit (and as such a unit every work-place is now regarded) is a lever for carrying out the plan and a real means for checking its fulfillment.

A characteristic feature of socialist planned economy is the "preponderance of demand over supply", to use a private capitalist term. This situation in the U. S. S. R. is not a result of historical conditions, that is, it is not due to the fact that the standard of living under the old regime was very low and is now rapidly rising, nor is it due to the fact that industry was so undeveloped that it cannot now keep pace with "demand" no matter how fast it may grow. The crux of the matter is that, since labor has ceased to be a commodity, the shackles which formerly prevented the growth of the requirements of the masses have been removed. There are no absolute limits to the growth of human requirements. They constantly change in form. Hence, the transition from capitalism to socialism creates in this constant upward movement of the requirements of the entire mass of members of the socialist society a powerful instrument for an exceptionally rapid development of productive forces.

On the other hand, as will be shown presently, socialism also removes the fetters of private economy from the productive forces and from the social apparatus of production, and thus constitutes the second prerequisite for its rapid growth. Accordingly, the policy of industrialization in the

U. S. S. R. is also not merely an expression of historical conditions for the construction of socialism in a backward country. If socialism had been introduced in a highly industrialized country like the United States, the consequence would have been a further rapid growth of industrialization - in a new form and a new sense. There would have been complete automatization of industrial processes on the basis of an enormous home market and of exports to backward industrial countries. Other forms of the growth of industrialization would have been the rapid industrialization and mechanization of agriculture, the reconstruction of cities on new principles, and many other forms of exceptionally intensive industrial activity. At the same time, the unfettering of the requirements of the masses and the productive forces of the country would have created a powerful and inexhaustible stimulus toward new development.

What then are the concrete premises for the socialist planned economy that has just been described?

The first is the complete socialization of all means of production and distribution: land, minerals, natural resources (water both as a source of energy and land irrigation), industrial enterprises (at first only all the large ones), all the banks, transportation (all the railways, steamship lines, etc.), commercial enterprises (starting with the large ones), and so on. All the economic "key-positions" are transferred to the socialist state. To this must be added a new feature which supplements the others, i. e. the monopoly of foreign trade by the socialist state. This is the only means by which connection between the socalist state and the unorganized external capitalist world economy can be planned.

The second premise, which is related to the first as the fundamental means for fulfilling the basic initial task (and all subsequent tasks), is that power passes into the hands of the working class, that is, the working class becomes the ruling class until classes and class distinctions are abolished. This new power cannot be the result of a compromise with the former ruling class; nor can the old forms of state organization be utilized. The very structure of the latter is such that it

secures the preponderance of real power for the capitalist elements in society. The new power is the absolute power of the working class, its "dictatorship", although in substance and form it is actually proletarian democracy. It breaks up the old type of state and sets up a new one, transitional to the time when the state and classes will die out.

The third premise, which is a corollary of the first two, is the abolition of classes and a gradual elimination of all traces of class distinction. This at first applies to the big employers, big landowners, and various parasitical groups, such as stock-exchange speculators. This provides the public authorities with huge revenues which formerly were expended in an unproductive manner. Henceforth they are utilized only for the purpose of accelerating the development of productive forces and improving the condition of the workers. The middle bourgeoisie is abolished more gradually. With regard to the petty independent producers, especially in agriculture, their transition to socialized production is effected by means of voluntary cooperation which at a definite historical moment reaches the stage of mass collectivization.

Another essential premise is the immediate improvement in the conditions of the working class by raising wages, by establishing an adequate minimum wage, by introducing first an 8-hour day and later a 7-hour day, with even shorter working days for dangerous and particularly arduous occupations, by improving housing conditions through the class redistribution of the housing resources during the initial period, through the introduction of social insurance in its various forms, etc. All this expresses the fact that the proletarian has become the collective master of production, it helps the proletarian to feel and act as actual master of production. All these measures are reinforced by corresponding measures in the realm of more general policies, particularly in the field of culture and education. This lays down the fundamental basis upon which social and economic planning can be successfully carried out. It calls for the active participation of the entire working class. It is expressed in socialist competition, shock brigades, the so-called counter-plans, etc.

The next premise is the concentration of leadership. This must go hand in hand with the concentration of production in industry, transport, etc. A system of directing bodies is set up for each sphere of economy, for the separate industries and for groups of enterprises. Corps of business leaders are created, homogeneous in social composition, social aim, social consciousness, social will and social action. These corps are reinforced by a ramified network of special organizations, consisting of those who directly take part in the industrial process. The entire system is subordinated to a single directing body - The Supreme Council of National Economy. (Special bodies are set up to manage transport, trade, credit, etc.) The historical course of events was such that in the U. S. S. R. these bodies were set up before the special planning bodies. Originally, they performed the functions of planning. The supreme body which linked up all the others was the government. But only when the Gosplan (State Planning Commission) was formed, did the function of planning receive complete organized and specialized expression. The creation of a single centralized directing system of guidance is the corollary of the principle of concentration and specialization of industry which immediately produces considerable material advantages.

A premise of developed social economic planning is the gradual elimination of the contrast between town and country. This contrast is one of the manifestations of the social division of labor - a typical feature of class society. The technical, economic and cultural backwardness of the countryside which Karl Marx aptly described as the "idiocy of village life", the scattered character of its economic organizations, have to be overcome by combining industry with agriculture. Big producing units - state farms and collective farms, must be established, based on the greatest possible mechanization of production and on the above-mentioned combination of industry with agriculture. Progress in this direction will result in agriculture becoming completely permeated with the principle of social economic planning. The gradual elimination of the social division of labor, particularly that between brain work

and physical work, is being accomplished by raising the general standard of technical skill of the workers, as can be witnessed by the great movement among the workers in the Soviet Union for mastering technique. It is being further achieved by the raising of the general level of education and culture; by the reorganization of the schools on new lines which make the universities accessible to all; by the organization of university extension courses in all possible forms; by the development of clubs and special societies; and by the development of the publication of books and newspapers. All these make for an increasing degree of perfection in the mass participation in the drawing up and fulfillment of plans.

The abolition of colonial exploitation and the placing of the toilers of all nationalities and races on an equal level is the corollary of the two preceding premises and reinforces them. Backward regions and backward strata of the population cease to be factors which retard the development of productive forces and the growth of mass consumption. Artificial concentration of industries in the region where the ruling nation predominates is put to an end. The systematic development of the natural resources of all parts of the former empire is undertaken. Social economic planning is introduced throughout the entire territory. An opportunity is afforded to all nations and races to display their special abilities. All this, of course, creates powerful additional resources for the socialist plan of economy.

In conclusion, it is necessary to mention one general premise of social economic planning. The greatest encouragement and development is given to the work of scientific research, especially in the field of technology and the social sciences, but also, of course, in all the other various fields of science. The plan as the manifestation of social consciousness, as the form of society's rational control over its economy, cannot base its methodology of industrial - technical development on anything else but science - the quintessence of social thought and experience. Therefore, science, scientific research, the specialists in science and technique, must enjoy and do enjoy special protection in a socialist state. Socialism calls into being a ramified

system of institutions for scientific research. It strives to transform the work of individual scientific research into mass scientific work. It attracts to itself the widest possible strata of workers. And socialism, which regards science, not as the private concern of individuals, but as a social function of the highest importance, advances the idea of planned scientific research upon a voluntary basis. A proposal to that effect has already been adopted by the Academy of Science of the U. S. S. R.

The premises enumerated above, if taken in their fully developed form, guarantee social-economic planning in its most all-embracing and developed form. However, social-economic planning, in less perfect form and on a much smaller scale, arises already on the basis of the first two basic and decisive premises, from which all the others begin to develop logically as their corollaries. From a "partial type of planning" (to employ Dr. Lorwin's terms) there inevitably follows the "absolute type". * For the social-economic plan of the proletarian state is simultaneously the plan of management and the plan of socialist reconstruction. It is the gradual reconstruction of the entire national economy on socialist principles.

The socialist plan of national economy is a struggle in more than one sense, and extends in many directions. It is not an academic theory or a dispassionate technical-economic calculation. The plan is the expression and the weapon of the latest struggle in human history which the working class is waging for the abolition of classes and for the building up of socialism. The plan is a phase of the struggle. The remnants of the former ruling classes try to influence the framing of this plan. They try to twist it to their liking in order to retard its development. In the course of planning and the execution of the plans a struggle is waged to overcome shortcomings due to mistakes in

* Dr. Lorwin is mistaken, however, in thinking that developed Socialism (Communism) presupposes a general levelling and regimentation. Marx defines the inter-relationships between society and its members under Communism by the formula "from each according to his abilities, to each according to his needs". Marx and Lenin were also emphatically of the opinion that the State would die out under Communism.

planning, and to inexperience and the complete novelty of the whole system of organized planning. New resources for the growth of productive forces and for the improvement of the conditions of the workers continuously come to light. The plan is constantly being corrected. So far the corrections have invariably been on the side of an increasing scale of production, of increasing rates of growth and a widening of the area covered by the plan. However, this struggle and the social dynamics which characterize the framing and fulfillment of plans do not lead to planlessness or anarchy. They merely express the incessant movement towards the extension of society's rational control over all its economic processes. The plan leads toward the command of all the productive resources of society.

We will quote a few examples to show what results can be achieved by the transition from private to socialized ownership in the means of production, by the use of a constantly expanding social scheme of economic planning. In regard to the utilization of the natural resources of the country, it becomes possible for the first time to organize the search for minerals in a scientific and systematic manner, based on the data of geophysics. Prospecting for metallic ores, for example, is carried on by special expeditions. They employ modern perfected methods in their researches in all the geophysical regions where it is expected that a particular ore can be discovered. And, of course, this work is in no way hampered by private property, either in land or in minerals. The result is an exceptionally rapid discovery and uncovering of hitherto unknown riches. Exploration is going on in a similar fashion for coal, oil, potassium, phosphates, sulphur, etc. That is why new and astounding sources of natural wealth have been constantly discovered in the Soviet Union in the past few years.

In the exploitation of natural wealth a state of affairs has been reached where the wasteful exploitation of natural resources caused by competition has been entirely eliminated. For example, competition has an especially pernicious effect on oil production. This has been entirely eliminated, and as a result the same area yields a considerably greater amount of oil. The intentional concealment of newly discovered mineral deposits and

the restriction of output in order to keep up high prices, which formerly hampered the production of oil and non-ferrous metals in Russia, has also been put to an end. Socialization of the sources of water power and its collective exploitation has facilitated the production of exceptionally cheap electricity; hence the cheap production of nitrates, aluminum, etc. The whole country is covered by a network of power stations which, according to plan, are placed into "rings". The planned construction of the so-called geographical combines and also of regional complexes of enterprises becomes possible. As an example of the former we may cite the grand project of the Ural-Kuznetsk Combine, which is now being fulfilled. This scheme is based on the joint utilization of Ural ore and Siberian-Kuznetsk coal. A regional complex of enterprises is also arising around the Dnieper hydro-electrical power station connected with the production of nitrates, aluminum, electrically smelted high-grade steel, an irrigation system, etc. Generally speaking, all the new big enterprises in the Soviet Union are now built on the principle of planned combination, full advantage being taken of the mutual utilization of gas and steam (for production purposes and heating), electrical energy, by-products, and "waste", and on the combination of industry and agriculture.

The social control of capital investment funds permits the construction of big and therefore technically better equipped industrial enterprises. For example, the standard metallurgical plant now being constructed in the U. S. S. R. is one that has an output capacity of about two million tons per annum. Its size is approximately that of the Gary plant in Indiana. Tractor plants are being built with an output capacity of forty to fifty thousand machines per annum. The Nizhni Novogorod auto factory will supply 140,000 automobiles per year; the Rostov agricultural machinery works is the biggest in the world, and so on.

Just as in a socialist state there is no need for concealing or hampering the utilization of natural resources, so there is no need for concealing new inventions by the restriction and hampering of their applications, such as the buying up of patents, the restricting of their use and deliberate neglect.

All inventions and improvements can and must be utilized. Invention is not a private matter. Hundreds of research institutes are working on inventions according to plan. The creative abilities of proletarian inventors are especially encouraged in every way. This has already produced important technical changes, especially in the coal industry and in the construction of agricultural machinery.

The activity of the masses of the workers is the greatest factor contributing to the success of social-economic planning. Not only do socialist competition and the shock-brigade - manifestations of a new socialist psychology - directly raise the productivity of labor, but the masses of the workers themselves are mainly instrumental in uncovering and discovering new industrial possibilities that so far have been unused. This enables them to exceed the original plans. It has led to the so-called "counter-plan", the idea of which originated a year ago. When the draft plan of production is sent to a factory, it is discussed there by the workers. They find that output can be greatly increased and cost reduced on each unit of production to a greater extent than that provided for in the plan. The plan is amended accordingly, i. e. it is replaced by a counter-plan.

The few examples cited above give a general idea as to why a backward country, which suffered enormous losses in the world war and which later experienced equally ruinous intervention and civil war, was able ten years after a mass famine, not only to restore everything that was ruined but to advance forward at a pace absolutely unparallelled in history. It has left pre-war standards of production far behind and is making uninterrupted progress at the height of a world crisis. These achievements have been accompanied by the reduction of the working day to seven hours and by the radical improvement of the working conditions of the workers in town and country. Furthermore, this progress was achieved without the aid of capital from abroad. All these, therefore, are the obvious fruits of the reconstruction of the U. S. S. R. on socialist lines. They are the results of planned socialist economy.

THE EVOLUTION OF PLANNING IN THE SOVIET UNION.

The social economic plan of the U. S. S. R. was not born in its present developed form. The premises which enabled it to assume its present form were not developed at one stroke. A long road has had to be traveled from the October Revolution to the present time. This road was covered while the Soviet Union was fighting against the technical, economic and cultural backwardness of the country. The fight was intensified by the consequences of the destructive World War, a hostile capitalist environment which meant blockade, intervention and outside support in the Civil War, to the remnants of the capitalist classes.

Briefly, the past period can be divided up into the following phases:

firstly there is the conquest of power, the break-up and reconstruction of the state apparatus, and the break-up and initial reconstruction of the economic foundations of the old régime (1917—1918);
secondly there follows the period of civil war and the policy of so-called "War Communism" (1918—1920);
thirdly there comes the transition to the "New Economic Policy" (N. E. P.), and to economic restoration (1921—1926);
there finally follows the beginning of socialist reconstruction and the development of "The Socialist Offensive" (1927 to present time).

This is a rough and conventional division but it gives the general background of the development.

In the first of the above-mentioned phases, it was impossible to develop social economic planning because of the economic disorganization inherited by the new power from the old. The new organs of power and the economic administrations were only just being formed. The key positions in national economy had only just been wrested from the former ruling classes. The need for planned economic leadership was fully recognized but the objective possibility of its realization was still lacking.

In the second period, the situation was no more favorable. The Soviets ruled over a continuously changing geographic territory.

For a long period the Donetz coal and metallurgical districts were cut off from the leading centers. So also were the important centers of the Urals. The Baku oil fields and the cotton growing districts of Central Asia were completely cut off until the end of the Civil War. In 1920, industrial production amounted to only 18 % of the 1913 figure. The production of pig-iron was only 2.4 % and the production of cotton textiles 4.6 %. There was even a period when all the blast furnaces in the Ukraine were idle. Under such conditions, economic activity consisted, in the main, in an attempt to keep industry - which worked mainly for defense - going as far as possible. Great efforts were made in maintaining the collection and distribution of the scanty food and raw materials resources. Market distribution failed entirely, and in order to secure state collection of agricultural products and to put a stop to profiteering, the market was almost completely liquidated. The system of "War Communism" was established. This was a form of planned economy but it was the economy of a besieged fortress. It kept strict account mainly of the stocks of articles of consumption and distributed them scrupulously according to the class principle. The centers of this narrow and one-sided planning activity were the People's Food Commissariat, the so-called Utilization Commission and the Planning Department of the Supreme Council of National Economy. Although this epoch was very unfavorable for the development of social-economic planning, it must be remembered that during this period the new ruling class removed its adversaries from all the economic "key positions". It built up a new state apparatus that included the apparatus of economic administration. In this struggle against unprecedented difficulties, there developed trained and steeled corps of workers - the future leaders of socialist economic activity.

It is very characteristic that in the last year of the Civil War epoch, on Lenin's initiative, a beginning was made in social planning with the working out of a general plan for the reconstruction of the national economy. This plan was based on the electrification of the country - the so-called Goelro-Plan - (The State Electrification Plan of Russia). This fifteen-year plan

for the technical and economic reconstruction of Soviet Russia was ratified in December 1920 by the Congress of Soviets and became the starting point of the whole subsequent work of planning.

The end of the Civil War marked the transition to a new epoch. The agricultural production of the small peasants, who had become the chief producers after the expulsion of the landowners and the redistribution of the socialized land, declined considerably in the period of "War Communism". The small peasant producers demanded manufactured goods in exchange for their agricultural produce and raw materials. This the disorganized industries could not supply. At the same time, the state of industry and the resources at the disposal of the State did not permit the organization of agriculture on the basis of a rationalized and mechanized large-scale production, for this demanded enormous quantities of agricultural machinery and implements. Moreover, the peasants had first to be given practical proof of the advantages of such a mode of production. The market stimulus had to be restored in order to encourage the restoration of the area of cultivation, stock-raising, etc. At the same time, the habit acquired in the period of "War Communism" of working without the aid of business accounting had to be eradicated. The bureaucratic excrescenses which had grown on the state and economic apparatus of the administration had to be removed. The first stage in the transition to a socialist business method was marked by the necessity for socialized industry to master the principles of market commercial accounting. Insofar as the new ruling class found it difficult to manage all the numerous small commercial enterprises scattered throughout the country which, however, were important for the restoration of the exchange of commodities between town and country, it was expedient to hand them over to private persons for utilization, but on a leasehold and not on an ownership basis; especially since their activity became an inducement to the state enterprises "to learn to trade" (Lenin). The totality of these measures became known as N.E.P. (new economic policy). On the one hand, N.E.P. was the expression of a policy appropriate

to the first epoch of socialist construction, for it maintained market relations in a modified form. On the other hand, it included at first minor elements of retreat in order to gather strength for another new advance. Already in 1922 Lenin declared this retreat at an end.

The gradual restoration of the productive forces of the country which had been retarded by the bad harvest and famine in 1921, enabled a beginning to be made in the systematic organization of planning. The State Planning Commission (Gosplan) was established as a commission of the Council of Labor and Defense * in February 1921. The Gosplan was instructed to draw up a single state economic plan similar to the plan of electrification. It was also to begin the drawing up of annual economic plans. In accordance with the principal of scientific planning, the Commission consisted mostly of specialists, engineers and economists; Krzhizhanovsky, an engineer and a Communist, was appointed chairman. In 1921, the Commission was only able to verify some partial yearly plans, which had already been drawn up by various economic organs (the fuel plan, for instance, and an outline of the plan of activity for the Commissariat for Agriculture), and to draw up an economic plan for 1921-22 which, in view of the circumstances of the time and the nature of the planning materials at the disposal of the Gosplan, was more in the nature of a food plan. But in 1922-23, it was already possible to lay down the principles of an industrial plan of which from 85 to 90 % was carried out. The plans of all the economic commissariats and the budgets were examined. An export and import plan and plans for the restoration of famine areas were drawn up. An outline of a Five-Year Plan for the development of the national economy which might possibly attract foreign

* The Council of Defense, formally a committee of the Council of People's Commissars, was formed in November 1918. It was in the nature of a small government commission. It was engaged mainly in mobilizing and distributing the economic resources of the nation for defense requirements. At the end of the Civil War it was reorganized into the Council of Labor and Defense - the Supreme Government Council which coordinates the activity of the Economic Commissariats and Centers. It should not be confused with the Supreme Council of National Economy, which is the Commissariat for Industry.

capital was outlined, for the use of the Soviet delegation to the World Conference in Geneva. (The attraction of foreign capital on the basis of concessions was contemplated as one of the elements of N. E. P.)

The State Planning Commission became the central advisory body of the government. It gave its opinion on all the important economic and technical measures that were proposed. By a series of decisions the rights of the State Planning Commission were widened and reinforced. The planning organs of the various governmental departments were subordinated to its methodological and organizational guidance, i. e. with regard to their internal arrangements, their divisions into sub-departments, etc. However, the State Planning Commission was never converted into a commissariat (Ministry). Its conclusions were never binding on the operative economic centers. The conclusions of the State Planning Commission and its projects were subject to endorsement by the government. The planning function was separated from the function of leadership and the latter was not subordinate to the former. Likewise, the planning organs of the various governmental departments, while subordinate to the methodological and organizational guidance of the State Planning Commission, were directly subordinate in their operative tasks to their respective departments.

A big stride forward was made in 1925 when all the hitherto separate plans were brought into a single system, called the "control figures" of 1925-26. (The fiscal year was then reckoned from October 1st.) The control figures were estimates of the volume of production (of agriculture and industry), volume of goods available for the market, the movement of prices, freight turnover, exports and imports, the productivity of labor and wages, house building, transport, investment of capital, circulation of money and credit, the budget, and the many processes of socialization. It was thus a highly developed and many sided plan. However, it was not as yet sufficiently coordinated internally. It was regarded as "a series of figures but not as a system of figures." The compilers were guided by imperfect methods of induction. They planned on the assumption that the

statistically established trends and relations of the past would continue in the future. They also used "expert opinion", "gradual approximations", but the method of balanced coordination of the separate economic elements was very little applied.

The control figures of 1926-27 were a great improvement, as also were the control figures of subsequent years. This was due to the completion of the process of restoration of the productive forces of the country. This restoration involved considerable technical reconstruction and much radical social economic reconstruction. There was a growth of planning organizations. Planning organs sprang up in all the large territorial units in the country. There was an improvement in the statistical material, etc. The capital funds investments section began to occupy a prominent place in the control figures. A distinct division with reference to economic "sectors" was introduced namely: (1) state enterprises; (2) socialized cooperatives and collectives; and (3) private enterprises and concessions. District control figures also began to be compiled. The balancing method was adopted; in 1927 an accurate and exhaustive grain and fodder balance was drawn up. A beginning was also made in calculating the total national income. Despite covert resistance and the sabotage of the supporters of the bourgeois system in the State Planning Commission which subsequently came to light, the plans and their execution showed a continuous and rapid growth. The socialist elements more and more assumed predominance in all spheres of national economy. The steadily developing "socialist offensive" of the working class and poor peasantry, based on the restoration of industry and the great expansion of resources, guaranteed the rapid technical re-equipment of industry and the construction of new gigantic and technically perfect works as well as the technical re-equipment of agriculture, which pre-supposed concentration of production. This brought with it at last the entry of peasants into the collective farms. It also meant the social isolation and liquidation of the remnants of the rural bourgeoisie - the kulaks. The remnants of the bourgeoisie were also driven out of their lease-hold enterprises in industry. The resistance of the kulaks to the "socialist offensive" led to temporary difficulties on the agricultural and

raw material markets. The kulaks previously had supplied a considerable share of this produce to the market. By the summer of 1930, however, these difficulties began to diminish. They were overcome by the successful application of the new forms of agricultural organization. By the summer of 1931 the possibilities of entirely overcoming these difficulties were in sight.

The "Five-Year Plan", which has acquired world-wide fame, was drawn up between the period of restoration and the period of reconstruction. It was a plan of economic development which was to be carried out in five years. In general it was based on a perfected scheme of control figures. It gives a clear perspective of, and indicates the direction which, the struggle for technical reconstruction, the development of production and socialist reorganization of economy will take. The first draft of the Five-Year Plan was begun in the autumn of 1926. It was examined by the Congress of the Planning Organs in the spring of 1927. It was subsequently revised by the introduction of two variants - the "minimum" and the "optimum" variant. The latter pre-supposed very favorable conditions for the realization of the plan, such as additional resources from abroad. At first, the Five-Year Plan was drawn up for the period 1926-27 to 1931-32. In its final form, which was published in 1929, it finally covered the period from 1928-29 to 1932-33. Owing to the return to the calendar year, the Five-Year Plan will be completed in 1933. However, it is common knowledge that the fulfillment of the Five-Year Plan is proceeding so successfully that its completion in 1932 is already fully guaranteed. It will also be the "optimum" and not the "minimum" variant that will be achieved, despite the efforts of the advocates of the bourgeois economic system to partially "spoil" the plan. The plan turned out to be a factor of enormous organizing significance despite the efforts of the remnants of the bourgeoisie to retard the rate of growth decided upon. To take account of and to calculate all the national economic resources in terms of time is no less important than doing it in terms of space. This gives a concrete aim and a unified slogan to the whole mass of the population. In both directions the significance of the Five-Year Plan is already enormous.

On the basis of the Five-Year Plan, we arrived at the "Social-Economic Plan of 1931". This plan includes all the national economic processes in their entirety. It includes, especially on the financial side, not only the budget but the State Financial Plan, which in turn embraces credit, all money expenditure, and the revenues from economic units, etc.. Hence the change in name (from that of control figures). The balance method now entirely permeates the plan. Grain, fuel, metal, transport, building materials, the fundamental equipment of enterprises, labor power, "supply and demand" of the principal commodities, money income, and the expenditure of the population are all calculated to balance The annual plan has become the social economic plan. It has become what such a plan should be - the plan of socialist management - both in form and substance. The social-economic plan is now a plan for completing the foundation of socialist economy.

THE CONTENT OF THE SOCIAL ECONOMIC PLAN OF THE U. S. S. R

The Soviet Union has not yet completed the construction of a socialist economy and a socialist society. The present phase is described in the resolutions of the leading organs of the ruling party in the U. S. S.R. - the Communist Party - and in the last Congress of Soviets, as the "entry into the period of Socialism". The task of 1931 was formulated as "the completion of the foundation of Socialist economy". Thus the transition to the socialist order is not yet completed.

However, already under these conditions economic planning on a national scale is going on. This means that the plan embraces the process as a whole. It guarantees the progress of society toward socialism. This means that the plan foresees all the most important elements of the national economic process. In the main, therefore, the plan decides the whole question of the tempo and direction of the whole social-economic process.

The plan establishes a general rate of growth of the whole national income. It is calculated on the basis of the inclusion of the largest possible number of the able-bodied population in the process of production and of raising the productivity of their

labor. It solves one of the fundamental problems which determines the rate of increase of production, namely, the problem of distributing the whole yearly output between accumulation and consumption.

The detailed plan of production for the separate industries lays down concretely the quantity and specification of the means of production and articles of consumption to be produced. For this reason it is also a plan of distribution. It determines the main channels along which the commodities produced are to be distributed for accumulation, industrial consumption, and personal consumption. A special feature of the social economic plan is that, instead of providing for production for an indefinite market, it at once makes provisions for a definite consumer. There is no gap between production and distribution. This is eliminated by the character of the social economic plan which is teleological in nature.

In accordance with the task of social and technical reconstruction, the plan also provides for the distribution of all accumulation among the various branches of economy. This is based on the fundamental ideas of the general reconstruction plan and on the scientifically determined priority of the various elements of this plan.

The plan provides for the distribution of all the elements of personal consumption among the various classes and groups of population. Each group shares according to the degree to which it has taken part in the process of production, as for example, the degree of skill or the tasks fulfilled with regard to the productivity of labor. For this purpose, therefore, the plan decides not only the amount of commodities of various kinds to be turned out by the socialized sector, but also by the private sector.

Finally, the plan lays down all measures that guarantee that the above-mentioned elements of the plan are put into operation. The plan fixes prices, wages and taxes and all the other elements of the financial plan which in the transitional period, when money-commodity relations are retained, serve to distribute and redistribute the monetary resources. It is thus that the general distribution and redistribution of all the resources of the

country is carried out.

The plan determines the sum total of the inter-relations between the economy of the Soviet Union as a whole and the world economy as a whole. It also determines the inter-relations between the economy of the U.S.S.R. and each separate country in particular.

Every year the plan has to an increasing degree embraced every element of the national economic process and of the process as a whole. The following data show to what extent the plan embraces at present the fundamental elements of the national economic process. In 1930 three-fourths of the whole national income came from the socialist sector; the private sector was responsible only for about one-fourth. It must be taken into consideration that even the private sectors program of production was greatly influenced by the state and cooperative organizations. By means of the contract system, the various state departments enter into an agreement with the independent small peasant producer, under which the latter undertakes to sell his future crops to the state and the state agrees to provide him with credits, seed, materials, implements, etc. The influence of the plan is felt almost in the whole domain of production: the taxation policy, the policy of prices, industrial and personal supplies, and the production of necessary crops are all determined and stimulated by the plan. According to the plan of 1931 the share of the private sector in the national income will be decreased still further - to 18 per cent, while the influence of the socialized sector on it will be increased to an even greater extent.

The decisive element in the plan is the plan of capital investments. Upon this depends the direction which expanded reproduction will take. In 1930 investments in the private sector represented only 15.5 per cent of the total sum invested in the national economy. In 1931 the plan provides that the private sector shall represent only 7.5 per cent. And even this small share is under the influence of the socialized sector. For private capital expenditure depends for the supply of machinery and building material on the socialized sector. The largest share of capital investments is distributed among the branches of national economy strictly according to plan. It is commensurate

with the definite aims pursued by the plan: rapid development of the heavy industries, strengthening the technical bases of agriculture, etc. The expenditure is further distributed on a territorial basis, the Soviet Union being divided scientifically into economic geographic regions. This element of the national economic process is to a great extent directly subordinate to the plan.

The industrial program from year to year is more and more influenced by the plan. The whole of large-scale industry belongs to the state. It is organized into a small number of large "corporations" * - one for each branch of industry. The work of these corporations is regulated and controlled by the state. Until quite recently planning for agricultural production was a far more complicated matter. It demanded a whole complex of complicated measures in order to attain the necessary volume and structure. The rapid progress of last year's collectivization and the consequent growth of the socialized farming sector provided a sounder foundation for agricultural planning. The indirect planning and regulating of 25 million farms was replaced by the more direct planning of 200,000 large enterprises - collective farms. These enterprises are united through their provincial unions and the All-Union Collective Farm Center. Contracting arrangements are made with those farms which are not yet organized into collective farms. The existence of 1400 machine-tractor stations, which are at the service of most of the collective farms for their basic agricultural operations, has had the same influence. (These are special enterprises which have at their disposal a considerable number of tractors and also various agricultural machines; they are distributed throughout the country according to plan.)

A very complicated and difficult element in the social-economic plan is the planning for the distribution and redistribution of labor power. It was only recently that the mass of the unemployed were absorbed into the process of production. Formerly, the ranks of the unemployed were increased every year by new arrivals from the country. The question of

* "United Industries", see Glossary.

replenishing the ranks of manual and mental workers in the growing socialized sector has, until recently, not created any special difficulty. However, the rapid growth of collectivization last year, the enormous development of agriculture, and the growing prosperity of the masses of poor and middle peasants, reduced the number of migratory workers seeking employment in the cities, in industrial enterprises and in the building trades. At the same time the rapid growth of the number of students in the technical colleges, the universities and other schools soon exhausted all the available labor resources of the cities. This despite the fact that an enormous number of women have been drawn into industry. Accordingly, the demand for labor power now exceeds the supply. The plans of the last year have been greatly complicated by the problem of a rational redistribution of labor power among the various branches of industry. There must be a rapid training of new corps, largely skilled corps, for the new technically perfect and complex enterprises. The new mechanized processes of production demand a particularly large number of workers. However, the enormous growth in the productivity of labor in agriculture will certainly release considerable labor resources.

The fact that the predominant mass of the agricultural population is now organized in collective farms provides a sound foundation for this new element in the plan. Furthermore, the planned distribution and redistribution of labor power in the entire national economy is facilitated by the fact that the most important resources of consumption are in the hands of the state. They are distributed according to plan so that the state has in its hands a considerable part of the steadily growing housing fund, a progressive wage policy, and other levers of the plan which are bound to facilitate the problem of labor power.

From the very beginning of planned economy, a complicated and difficult element in the social economic plan has been the plan for the distribution and redistribution of resources produced by the private sector. The plans for collecting grain, butter, eggs, wheat, and even to a certain extent, technical crops and a whole series of other agricultural products, aimed until quite recently at embracing millions of small owners who strove to make

as much profit as possible out of their output. The demand for agricultural produce has increased enormously because of the rapid industrialization, the growth in the numerical strength of the working class, and the growing increase in its income. The well-to-do peasants, especially the kulaks, tried repeatedly to take advantage of this situation. They tried to secure such a redistribution of the national income as would most benefit them. They refused to sell the marketable part of their produce to the state. The Soviet Government could not tolerate such a redistribution of resources. This would have been tantamount to strengthening the capitalist elements of the country-side and diminishing the rate of development of the nation as a whole. A stubborn fight revolved around the procuring plan. This lasted for years but ended with a decisive victory for the socialized sector.

The collecting organs are able to control the markets because the state controls nearly the whole industrial output and means of transport, and because it has a monopoly of foreign trade. At the same time, the government has set a limit to the exploiting aspirations of the kulak elements of the country by means of taxes and other measures. This most difficult sector of the plan has in the main been taken under control. Owing to the growth of collectivization and to the popularization of the contract system among the whole peasantry, this sector of the plan, as time goes on, will interfere less and less with the fulfillment of the social economic plan.

Questions of culture and social life have been given prominent places in the plan. The cultural plan lays down the leading ideas of polytechnical education, compulsory primary education, and the training of corps. It also provides for a network of schools, according to the various types of students and the various groups of the population. It sets rules for admission and criteria for graduation. It specifies the proportion between the various qualifications in the educational institutions, which serves as a guarantee against the over-production of one type of worker and the under-production of others. The plan really covers the entire network of social and cultural institutions.

The plan now also includes questions of health protection and social life. All forms of medical and sanitary measures are carefully mapped out: work in health resorts and sanatoria, the development of rest homes for manual and mental workers, schemes of physical culture and touring, the organization of public restaurants - indeed all possible forms of social welfare and social life. The housing plan was already included in the first control figures of 1925-26.

Following is a list of the various branches of economic and cultural activity according to the 1931 plan: (1) electrification; (2) heavy and light industry; (3) agriculture; (4) transport; (5) post, telephone and telegraph; (6) consumers' cooperatives; (7) labor; (8) economic corps; (9) public instruction; (10) scientific research; (11) health protection and social life; (12) housing; and (13) the financial plan. All these branches of the plan are also undertaken on a regional scale. The plans are mostly divided into the plan of current operations and the plan of capital construction. They are expressed in monetary units as well as in units of kind. They are coordinated with a definite increase in the productivity of labor, of wages, the reduction of cost of production, and the reduction of prices.

Thus, the social economic plan is gradually being converted into a plan that calls for the reconstruction of the entire social life of the country. It is based on material and economic premises. It exercises a direct influence on the various forms of social activity and on economic processes. The plan has become not only a plan for the construction of socialist economic system, but a plan for the construction of a socialist society.

FORMS OF PLANS.

Social economic planning is affected by the various forms of plans which are drawn up. They differ from one another according to the tasks set, the period for which they are drawn up, and the details that they contain, etc. The important thing is the division of social-economic planning into current planning and perspective planning. Both forms of planning are permanent and run parallel to each other. The object of the perspective planning is to give a broad program for social and

technical reconstruction for a more or less prolonged period - 5, 10 or 15 years. Only the existence of such a broad program can guarantee coordination in the more important measures which are intended to effect a distribution of the productive forces of the country on new lines. It requires such a broad planned base in order to lay the successful foundation for big building operations, for the reconstruction of the technical base of whole branches of social economy (agriculture, transport, housing, etc.). Only thus can we bring about big and important changes in social relations.

One of the forms of the perspective plan is the general plan. The first general plan was the State Electrification Plan of 1920 (The Goelro Plan). This plan called for the electrification of Soviet Russia and the reconstruction of the whole country on this new technical basis, which under the Soviet Government leads to socialism. Such a general plan worked out after the conquest of power must be in the main a plan for the whole transition period. It must be a plan that strives for the construction of a socialist society. The general plan can be divided into plans of shorter duration. The shorter plans are distinguished by their concreteness. They are intended to fulfill certain tasks of the general plan with regard to technical and social reconstruction. Perspective plans for 3 to 5 years have been very popular in the Soviet Union. An example of this is the "Industrial Five-Year Plan" (this must not be confused with the present Five-Year Plan) which was worked out by the Supreme Council of National Economy in 1926. The "Five-Year Plan of Social and Economic Development of the U. S. S. R." adopted in 1929 has become known all over the world. At first the bourgeois critics regarded this plan as sheer fantasy, but now the whole world admits that the plan is being more than carried out. Already preparatory work is going on for the elaboration and projection of a second Five-Year Plan.

Along with the drafting of a perspective plan, systematic work is being done in working out current plans for a year in advance. The object of these plans is to fulfill part of the general or Five-Year Plan in the given year. This form of

plan has been much more developed than any other. Yearly plans for all the most important branches of national economy have been drawn up since the establishment of the State Planning Commission. As we have already pointed out, all these branch plans were united into one national economic plan in 1925-26, and this has continued ever since. Every year this form of plan is made more concrete. It is expanded and becomes the fundamental operative plan. At the same time it is the goal towards which millions of workers in factories, on collective farms, in transport services, etc. are striving from day to day.

The growing importance of the role of the single operative social economic plan in the every day work of all economic units has made it necessary, beginning with 1929-30, to divide this plan into quarters. Before the beginning of every quarter, the quarterly plan is re-examined in accordance with seasonal peculiarities. Changes resulting from the fulfillment of the plan in the preceding quarter are incorporated into the plan of the next quarter. This shows to what extent the social economic plan has become a concrete reality, and to what extent it determines all the proportions of industry and indeed the whole trend of economic activity. In some branches of industry, such as the corporations and trusts, the form of monthly and sometimes even of 10-day and 5-day plans is being adopted.

All the previously mentioned plans have one very important distinguishing feature. All of them are plans that relate to the national economy as a whole. They guarantee the uniformity and coordination of all the elements of the plan which serve definite and concrete purposes. All of the plans guarantee the fulfillment of the task defined above - large-scale industrialization, the improvement of the condition of the workers, and socialization.

THE SYSTEM OF PLANNING ORGANS.

The central organ of state planning and accounting in the Soviet Union is the State Planning Commission of the U. S. S. R. This is a Commission of the Council of Labor and Defense. It has the rights of a Government Commission. All the instructions

of the State Planning Commission with regard to the organization and the methodology of planning and accounting must be carried out by all the links in the state and social system.

In every federal and autonomous republic in the Soviet Union, in every region and territory, in every administrative district, * and in large towns with a population of over 20,000 there are planning commissions of the government, of the respective republic, or of the executive committee of the Soviets of the respective, administrative and territorial unit. Every one of the commissions is a central planning organ with respect to the territory of its respective republic, region, district, etc.

There is a special planning body in every People's Commissariat of the U. S. S. R. and of the Republics, as well as in every government department of the regional executive committees. This planning body has rights corresponding to those of the central administration or department (i. e. rights of the major subdivision of the corresponding People's Commissariats or government departments). In turn it is the planning center with relation to the planning work of the subordinate economic organizations and enterprises. These planning organs are above the planning organs in every economic organization: in corporations, trusts, railway boards, shipping boards, etc. These in turn are above the planning organs of the individual enterprises, such as industrial works, factories, power stations, etc. Of late this system of planning organs is being amplified by an enormous number of planning brigades in all enterprises. Planning organs exist also in all cooperative organizations, both local and central in character.

This network of state and economic planning organs, which permeates all the divisions of the economic organism of the Soviet Union, is combined into one planning system, based on

* The Union of Soviet Socialist Republics consists of Federal Republics - the Russian, Ukrainian, White Russian, the Transcaucasian Federation, etc. The Federal Republics include national autonomous republics, such as Tartar, Bashkir, etc., and also regions and territories divided according to economic and geographic principles. The lowest administrative and territorial unit is the district, which corresponds roughly to the county in the United States.

orderly subordination. For example, the planning organ of a trust controls the planning work of the enterprises subordinate to it. At the same time, it is a branch of the planning organ of a corresponding People's Commissariat (the Supreme Council of National Economy, the People's Supply Commissariat, the Commissariat for Transport, etc.). The planning organ of the trust abides by the latter's methodological and organizational decisions. In turn, the planning organ of the People's Commissariat, which controls the trusts and other economic organizations subordinate to it, abides by the methodological and organizational decisions of the State Planning Commission. In similar fashion, the State Planning Commission of any republic or region which controls the planning work of this territory likewise abides by the methodological and organizational decisions of the State Planning Commission of the Union.

This principle of the subordination of all the planning links along a branch (economic) and vertical (territorial) line guarantees the general connection and the complete uniformity of the work of all the planning organs. One of the main principles of the work of the territorial planning organs is that the economic plan of a given territorial unit must include all the enterprises functioning in their territories, even those which are subordinate to the Union economic organizations (the enterprises of the U. S. S. R. are divided into: (1) enterprises of Union importance and (2) enterprises of local importance. The former are directly responsible to the state center and the latter to the republics, the regions, and the various territories. As a result, and irrespective of the administrative subordination of any enterprise to Union centers or other bodies, the local planning commission is able - in fact, is duty-bound - to draw up a general comprehensive plan for the entire economy of the given territory. In this way it coordinates and connects the interests of national and local economy.

As planning is applied to such phases of socialist construction as education, health protection, scientific research, the organization of social life, etc., planning organs have been established in the respective Commissariats of Education, Public Health, etc. They have also been set up in the local departments and

organizations which regulate social and cultural construction.

Statistics and accounting are considered one of the most important state functions of the Soviet Union. Like the planning organs the accounting and statistical organizations exist in all the branches of the Soviet system of administration. The structure of these bodies and their inter-relationships are analogous to the structure and inter-relations of the planning organs. Insofar as the larger share of the national economic production and distribution now takes place according to plan, the entire registration of the various phases of economic production and distribution is, in substance, a recording of the progress of the social economic plan. Therefore, all the statistical and accounting work in the Soviet Union is carried on with a view to giving as much practical help as possible to economic and planning work. The determination of the Soviet Government to link up closely economic planning and accounting is proven by the fact that it has vested the State Planning Commission and the local planning bodies with the duties of a central statistical board. Special sectors which control recording thruout the country have been formed both in the central and local planning bodies.

The gradual execution of the plan is recorded and verified by two methods. The first method is that of "conjunctural observation" of the execution of the plan. The most important indices of the fulfillment of the economic plan are compiled and the results transmitted by the respective enterprises and cooperative societies to the organizations to which they are subordinate every five or ten days (as a rule by wire). The individual economic organizations and People's Commissariats, and through them the State Planning Commission, are able by means of the data which they collect from the enterprises in all parts of the Soviet Union to get information as to just how the plan is being fulfilled and to determine what decisions the situation calls for. The second method consists in receiving complete accounts from all the state enterprises and cooperative societies. These accounts enable the People's Commissariats and in fact the whole planning system to analyze thoroughly the results of the plan and also

the factors and conditions which have made these results possible. This places further proposed planning on a sound accounting basis.

DRAWING UP A SOCIAL ECONOMIC PLAN.

Planning in the Soviet Union differs fundamentally from the planning which takes place in individual undertakings in capitalist countries. In the Soviet Union the unity and coordination of planned work as a national whole enables the plans of separate economic units to be combined into a single plan for the whole national economy. The organizational forms of economic administration in the U. S. S. R. and even the organization of planning itself are the premises for this unity.

Centralized management and decentralized achievement give a high form of economic concentration which includes all the features of the economic process in a manner which is impossible for any capitalist country. The supreme council of national economy controls 73 industrial corporations (or united industries) of All-union or republican importance. They total 4,700 factories. Further, there are 26 corporations totalling 2,600 enterprises which are under the control of the People's Commissariat for supply (since 1930 light industry, with the exception of textiles, has been transferred from the control of the Supreme Council of National Economy to that of the Commissariat for Supply, formerly a division of the Commissariat for Trade). These plants are responsible for the whole output of large-scale industry in the country. A volume of commodity output amounting to 30 billion rubles, according to the 1931 plan, is concentrated in this comparatively small number of organizations. Almost the whole of small industry also has been concentrated. The All-Union Council of Cooperative Producers controls nine Republican Unions with 25,000 organizations having 40,000 workshops in which there are 2,850,000 cooperative producers. In 1931 their output will amount to 5.3 billion rubles.

Furthermore, the Commissariat of Transport operates and controls all the railroads. These have a combined length of 81,000 kilometers (50,600 miles). Their yearly income will

amount to 4.5 billion rubles, according to the plan for 1931. The Commissariat of Transport administers them as a single economic organization.

A few years ago there were 25,000,000 individual farms in agriculture. At the present time about 14,000,000 farms have been concentrated and organized into about 200,000 collective farms. These collective farms are affiliated to 35 or 40 collective farm unions. In turn these unions are controlled by the collective farm center of the Soviet Union. The economic activity of the remainder of the individual farms is regulated by a number of organizations through direct and indirect methods. The Tractor Center controls the work of 1,400 machine and tractor stations. Furthermore, a considerable role is played in agriculture by several thousand big state farms. These farms cover an area of several million hectares and are directed by the People's Commissariat for Agriculture of the Soviet Union.

All the district electric power stations in the Soviet Union are under the control of a single organizing center. This center also regulates the electric power stations of industrial and other enterprises.

A high degree of concentration has also been reached in the sphere of distribution. The whole of the wholesale trade is organized, while of the retail trade 98 % is in the socialized sector. It should be noted that 75 % of the entire goods turnover is controlled by the consumers' cooperative system, organized as a single system in each republic. The remainder of the retail trade falls to the trading departments of the industrial corporations and other organizations of the socialized sector, and is controlled by the People's Commissariat for Supply.

Finally, it should be noted that the State Bank, which has branches in all the large centers of the country, and the Commissariat for Finance, regulate the financial resources of the whole socialized sector. They take care of profit and depreciation on the one hand and expenditures on capital construction, increasing working capital, and various other expenditures on the other hand. This single financial system distributes and redistributes the financial resources of the national economy

among the various business organizations.

Turning to the work of drafting a single economic plan for the whole country, it must be emphasized once more that all the work of planning is so constructed that it combines the concentrated will and aim of the working class organized as a whole with the local initiative of the masses of workers in each subordinate economic unit. To obtain such coordination and before commencing to draw up the social economic plan for a lengthy period - one year or five years - The Communist Party and the Soviet Government set forth concretely their leading aim and social purpose for this period. They set it forth in accordance with concrete material conditions that prevail in the Soviet Union and the outside world, starting from the general aim of constructing a socialist society on the basis of the maximum development of productive forces and the systematic improvement of the material conditions of the workers.

The leading aim of each stage of development takes into account the state of the national economy, the class relations within the country and the conditions of the outside world. It indicates the ways and means and also the rate at which the national economy will be technically and socially reconstructed. The leading aim of each period formulates tasks in the sphere of collectivization and socialization; it sets down the proportion between the increase of the accumulation of capital funds and the increase of consumption; it indicates the chief sections where capital expenditures are required. Thus it establishes a certain system of priorities in the plan for the reconstruction of the national economy (e.g. investment in industry in excess of agriculture, in heavy industry in preference to light industry, etc.) Finally, it determines the policy of prices and wages, i. e. the policy with regard to the distribution of resources for consumption between the various groups of the population. The leading aim or directive, however, does not give detailed figures for all these tasks; it does not indicate all the proportions in the development of the various parts of the national economy; it does not lay down concrete tasks for individual sections of the national economy

or for big trusts and factories. Therefore, it cannot serve as a direct basis on which to start drafting a plan for all districts.

This function is fulfilled by the Gosplan (The State Planning Commission) which, with the close cooperation of all the commissariats and on the basis of the leading aims, draws up limits and directions for all the main branches of national economy. The Gosplan, in drawing up these limits and directions, bases its plan first on a fairly complete report of the condition of the national economy at the time that the work of planning is begun. It studies the conditions and capacity of the productive apparatus, the tentative new units which are expected to come into operation, the resources of consumption that are available, the products which can be obtained from industry during the time period of the plan, the trained labor power available, the sphere of production, etc. It pays special attention to the results of the social reorganization of individual economic units. It makes an estimate of the form and possible methods of resistance which the remnants of capitalist groups may put up.

Further, in drawing up these limits and directions, the Gosplan and the governmental departments take as their point of departure the results of scientific research carried on by the numerous institutes and laboratories of the country, the activities of which are organized and subordinated to the tasks of the plan, and also the latest technical achievements in all parts of the world. The limits and directions allow for the introduction of these scientific and technical improvements on a mass scale. They are applied in the work of the economic organizations, in every place where they are applicable and expedient from the point of view of the whole of national economy (mechanization, rationalization, standardization, etc.). The limits and directions allow also for necessary improvements in the organization of labor and the further rationalization of the productive process.

Using these data the limits then indicate the possible rate of growth of the whole of the national economy and of important individual sections. The limits set tasks both as to quantity and quality for every branch of national economy; they indicate

the distribution and redistribution of available and anticipated resources among them. When establishing limits for any group of factories or for any branch of industry the leading aim is of decisive importance. For example, the leading aim of the collectivization and reconstruction of agriculture calls for the rapid erection of tractor works, the importation of tractors from abroad, and for a change in the orders given to the agricultural machinery factories (machines to be adapted to tractors instead of to horse-drawn machines, etc.).

The leading aim for a definite plan for reconstructing transportation demands that the limits and directions allow for an extensive program of reorganization of the work of those factories which supply equipment for transport. The leading aim for making the Soviet Union independent of foreign countries in a number of lines determines the tasks given to corresponding factories and requires the construction of new ones.

The limits take the form of a plan which is coordinated and connected in its main elements. Although it is only preliminary and approximate, nevertheless, it is a unified plan of the whole of the national economy. It has to be verified, made more precise, and amended on the basis of the experience of tens, thousands and millions of workers who participate in the economic process. The method of determining limits on the whole is the same as the method employed in drawing up the final plan. This method is the m e t h o d o f b a l a n c e.

All the tasks which are given to the various branches of industry and to various big undertakings have to be reduced to a single system. All the tasks in the spheres of production, distribution and exchange have to be mutually coordinated. The principal method by which this coordination is achieved is the method of balance. The limits which are the tasks for the individual branches of national economy are presented in the form of a number of preliminary balances. They run from a simple balance to the most complex, including the combined balances of all the main elements of the national economy. The limits are verified by the method of balances in order to see whether production corresponds with consumption in the main phases of

the plan. The metal balance, for example, must coordinate the stocks and output of metal for the period of the plan with the consumption of metal by all the chief industrial and constructional organizations of the country.

If, in the course of the definition of the limits, it is found that there is a divergence in the balance, it is necessary then to increase production, to import from abroad, or else to reduce the consumption of metal. The actual selection of items to be balanced is made on the basis of the leading aim. The balance, or separate parts of it, is included in more complex and more general balances which may take the form of values (such as the balance of prices and cost of production plus profit, the balance of variations in the cost of production, and the efficiency of labor and wages).

The peculiar feature of the method of balance is the fact that a series of material balances are examined, not separately but complexly. In establishing any particular task in the sphere of production or construction, the limits must take into account the supply of the necessary materials by the related organization - fuel, metal, building materials, labor power, etc. In each of the material balances (metal, fuel, raw materials, building materials), producers and consumers must be assured such proportions as will assure them sufficient supplies of their w h o l e c o m p l e x o f m a t e r i a l s. The whole system of material balances is united in this fashion into a single fundamental balance of production and consumption for the period of the plan.

Contacts with world economy occupy a special place in the plan. Almost any deficit in any material element can be balanced by the importation of materials from abroad. These however, must balance with the planned exports.

The balance method is employed in order to establish the general volume of accumulation in the country and the distribution of accumulations between the various branches. The balance method determines all the resources of consumption and their distribution and also the income and expenditure of various groups of the population. The same method in the form of the single financial plan takes care of the distribution and redistribution of

money resources between all the economic organs in the Soviet Union thru its financial institutions. This balancing of all the chief elements of the national economic process is not limited to All-Union balancing. The enormous distances between the various parts of the Soviet Union call for coordination in time and space as one of the chief problems of the plan. Along with the plan for the entire Soviet Union, a plan for each separate economic-geographic region is drawn up. A number of balances, such as the balance of labor power, the balance of production and consumption of such bulky materials as fuel, building materials and grain, and the balance of the income and expenditure of the population, must be drawn up for all these regions. The method of balancing all the chief elements in the limits gives unity and coordination to the tasks of both the Soviet Union as a whole and of the individual republics and provinces. In conditions where the plan is a dominating feature, where it embraces all the chief elements of the process of national economy, where social and economic anarchy is overcome, and where society is being consciously constructed on socialist principles, the method of balancing subordinated to the leading aim of the plan is the fundamental method of social economic planning.

A different and incorrect method of planning was proposed in the U. S. S. R. by bourgeois economists and the so-called "wreckers". It was a method of "planning" based on spontaneous economic development, on the laws which had operated in the past. This in fact meant the renunciation of the active socialist leading aim and was an attempt to preserve bourgeois elements in economy and tacitly to adopt capitalist economy as the leading aim. For example, V. Groman considered that "the methods and forms of changing society are dictated by the objective conditions of society and the objective trends of its development which are inherent in it." * These he takes as empirical laws of the statics and dynamics of national economy. Hence he concludes that the principal method of drawing up a plan of national economy is the method of static and dynamic

* "Planned Economy", No. 1, 1925, page 88.

coefficients. It is, in other words, the method of the extrapolation of the events of the past projected into the future. ("The achievement of pre-war relations, in which the conditions for economic equilibrium were expressed, are to a great extent regulative norms, in the objective sense of the term, for the present economic process.") ** If we analyze this method we will clearly see to what planning by such methods would have inevitably led. The rates and proportions inherited from the capitalist past were to serve as a criterion for the socialist future. Pre-war relations of value were to be obligatory in the plans of the future. It would have been impossible by any such methods to rebuild society, to abolish crises and construct a planned economy. Bazarov, while doubting in principle whether the planning of the social division of labor is possible, is of the opinion that purposeful planning is applicable only in the state sector (with regard to the planning of the social division of labor, Bazarov said in his thesis "On the Methodology of Perspective Planning": "The planning of the social division of labor is an unexplored region in the full meaning of the word and the problem itself involves serious differences of opinion.") In the private sector of agriculture Bazarov believed that it is necessary to determine the tendency of development which will serve as the "foundation on which teleologically constructed perspective plans for the separate branches of industry can be adopted."

In all analogous theories there is always used the method of studying the trends and relations of the past. For their authors are seeking for "economic equilibrium". They are seeking it on the basis of the spontaneous laws of capitalist relationships. Such theories like the "infantile disorders" in the socialist method of planning are now a thing of the forgotten past. Year by year the work of planning becomes more full of meaning, more purposeful, and more concrete. At the same time there is an increase of synthesis of unity, and of the coordination of the plan. This is assisted by the mass planning work which goes on throughout the country on the basis of limits and directions.

** Ibid, page 98.

The limits or programs of the Gosplan of the Soviet Union are passed on to all governmental departments, republics and districts. The latter detail them out among the corporations, trusts and complexes of homegenous factories. The limits and directions on the drafting of the plan are merely tentative and provisional. They are drawn up several months before the plan comes into operation. They indicate the main idea of the plan for the ensuing period and are subject to thorough discussion and critical examination. They are made precise and amended in accordance wth the proposals made by the central and local planning bodies, by the public and business organizations, and by the millions of workers in each respective district and factory. From year to year the importance of the planning work carried on in these local organizations increases enormously. It finds powerful expression in a mighty wave of "counter-plans".

Until a few years ago only a relatively small group of workers took any part in the work of drawing up the plans for the respective enterprise or corporation. The planning group, the factory management, the higher technical staff and members of various conferences and congresses - these in the main represented the permanent participants in the work of planning. During the past year, however, the number of those people taking part in this work has increased enormously in all enterprises and in many cases the whole mass of workers in a given enterprises takes part in discussing the plan submitted by the leading planning organization of the factory and makes suggestions for its alteration.

Counter-plans play an enormous part in accelerating the development of national economy in the Soviet Union. The counter-plan in many cases, based on the limits of consumption given for raw materials, fuel and other items of industrial consumption, represents a higher program of work, and in particular higher qualitative indices - a greater increase in the productivity of labor and a greater reduction of the cost of production. The counter-plans break down the conservatism of certain branches of the economic apparatus. It brings to life potential resources that were previously unthought of. The counter-plans, by

mobilizing the masses for a higher plan, discover new resources which were concealed in the respective enterprises. It gives an impetus to an enormous creative effort, to invention and to the rationalization of the whole process of production.

The counter-plans of the respective enterprises are supplemented by the counter-plans of entire united industries, regions, and republics. The united industry, governmental department, or regional planning organization, upon receiving the counter-plans from the factories, compares them with the limits that have been established for the whole complex of enterprises under its charge. Knowing the task that has been set for the particular branch of industry or region and the place it occupies in the general plan, and knowing on the one hand the conditions and the difficulties with regard to supply, and on the other hand, the acuteness of the demand for the products of the particular branch of industry, the united industry and regional planning organizations utilize the material collected from the factories. They take account of the changes made by the counter-plans in the original limits. They draw up their general plan for the branch of industry or for the region as a whole, and in it they distribute the tasks for the separate factories. The fundamental and decisive criterion for carrying out such a distribution of the general task among the factories is the interest of the national economy as a whole and not the separate interests of any individual worker or group.

The plans of the departments and republics sometimes differ considerably from the original limits. In their concrete and corrected form they are sent to the center, to the State Planning Commission (Gosplan) of the Soviet Union, which has the task of synthesizing them into a single plan of national economy. All the principal disagreements and disputes, which are in fact only different variants of the balance of various elements in the national economic process expressed in terms of commodity products or money are revealed and examined in the course of the work of the departments and republics.

The method of balance is again the principal method in the final stage of synthesis. It is applied to the coordinated and

corrected material. The specific work of planning departments, particularly of the Central Planning Board (a department of the Gosplan) is to compare, coordinate, and equalize the relations of the balances. In point of fact, the basic items in the system of figures are the result of years of work on the control figures which have their foundation in the Five-Year Plan, and are reinforced by the counter-plans. When preparing the final draft of the plan for the current year, the chief task is to make the items more concrete and to balance them.

The mass work which is carried on in connection with the plan gives accurate and up-to-date information regarding the condition of the productive forces and the production relations in the country; makes valuable corrections in statistical data; and also supplies a mass of rich material on the basis of which the task of economic policy and the particular aims of the plan are made more exact.

The Gosplan draws up the final draft of the plan after having discussed it with each separate department and at a special conference of workers from planning and scientific institutes. The plan is then submitted to the government for ratification. After it has been ratified by the government, the single plan of national economy is parceled out by the departments and republics among the united industries and regions. The latter carry the plan down to the individual factories and factory departments. Sometimes the obligations under the plan, of each machine or workbench, are indicated in the form of concrete operating tasks. The plan is divided according to time into yearly, quarterly, monthly, ten-day, and five-day plans.

The single plan of national economy drawn up with the help of the masses and expressing the will of tens of millions of workers is actively carried out by them. The struggle for the fulfillment of the plan takes place on all sectors on the economic front. The numerous difficulties which arise during the drive for its fulfillment are overcome. The fulfillment and the surpassing of the plan by every sector becomes a matter of honor for the respective groups of workers in the various sectors, and becomes an object of competition among them. Every phase

of the plan, every part of the task attracts the attention of millions of workers. The press gives daily reports on the progress of the various sectors of the social economic plan; the sowing campaign, the plan for hauling building material, lumber floating, grain collections, subscriptions for loans, and all the other regular and periodical work necessary for the fulfillment of the plan.

Under the conditions prevailing in the Soviet Union "conjunctural observation" that is, observation as to progress in the fulfillment of the plan, is of extreme importance. By means of such observations, all the changes that take place during the course of carrying out the plan are noted, the cause of these changes are explained, and it is made possible to assist in the fulfillment of the plan and to introduce corrections in the plan during the course of its fulfillment. Since there is a close interconnection between all the branches of the national economy, a breach in the general line or a retreat from the plan on even one sector affects a great number of other sectors, no matter how well the latter may have been working. Every serious deviation from the plan in one place requires that coordinated measures be taken in others. It is, consequently, extremely important that each factory be placed upon a business basis. A departure from this basis is a signal that the particular factory has retreated from the plan.

The sum total of the tasks, both quantitative and qualitative, assigned to a factory are expressed in its industrial-financial plan, which coordinates all tasks in a single common plan. A failure to carry out this plan signifies a failure to carry out either the quantitative or the qualitative tasks, or both. This means either that insufficient products have been turned out or that too much raw material, fuel, auxiliary products, or labor power have been used, involving a discrepancy in income or expenditure. Departure from the business basis means that a number of links in the balance are disturbed, and this cannot but affect many other sectors. The struggle to keep a factory on a business basis is actually a struggle to fulfill the plan as a whole.

Therefore, every factor which fails to fulfill its share of the plan

during a certain period of time is in duty bound to make up the deficiency during the remaining period covered by the plan. At the same time, the higher bodies, who keep vigilant watch over the fulfillment of the plan by each separate factory and group of factories, make the necessary changes and regrouping in the work of the other sections which are involved in any change. The work of each factory is a link in the general chain of work. It is the duty of every factory staff and of the workers of the Soviet Union as a whole to see that each factory functions properly. This is why every worker in the Soviet Union keeps such a strict watch over the achievements of the plan on every sector of the economic front. The business basis (economic accounting) is the gauge by which the fulfillment of the plan is measured. This is why public attention in the Soviet Union is riveted upon the problem of placing every factory upon this basis.

The plan of national economy in the Soviet Union is a plan of the millions of workers. Millions of workers draw it up, carry it out, and watch closely the course of its development. This is the basis for the success of planned economy. This is the fundamental advantage of the Soviet system of economy. This is the source of the unprecedented rate of development in the Soviet Union.

PLANNED ECONOMY IN OPERATION

BY L. S. RONIN, MEMBER OF THE INSTITUTE FOR ECONOMIC RESEARCH AND MEMBER OF THE STATE PLANNING COMMISSION (GOSPLAN), MOSCOW.

INTRODUCTORY.

During the past ten years the development of national economy in the Soviet Union has been determined by factors which the November Revolution established. These factors include: the dictatorship of the proletariat; the nationalization of the land, large-scale industry, banking and transportation; the abolition of private property in all the basic means of production; and the monopoly of foreign trade. Since the November Revolution the proletarian government, through its control of the economic key positions and on the basis of the New Economic Policy, has carried on a systematic struggle for the elimination of capitalist elements and for the transformation of small-scale peasant economy to large-scale agricultural production. It has carried on a struggle for planned economy, for the building of a socialist society.

What have been the results of this struggle?

The national economy of the Soviet Union suffered a severe decline as a result of the imperialist war and of the civil war, as a result of internal counter-revolution and of the subsequent intervention by a number of capitalist countries. Industrial output, which was valued at 5.6 billion rubles in 1913, declined to one billion pre-war rubles in 1920. Agriculture also suffered severely. The sown area in 1916 was 281.6 million acres. By 1920 the sown area had decreased 25 per cent, while the gross production of grain had decreased 50 per cent. Railway transportation was completely disorganized. In 1913 there were 20,030 locomotives; in 1920-21 only 18,757 of these were left. The percentage of locomotives in disrepair increased from 16.3 per cent in 1913 to 62 per cent in 1921.

THE RESTORATION OF NATIONAL ECONOMY.

Upon the conclusion of the civil war, the Soviet Government

* The author of this report was assisted in his work by the staff of the Institute for Economic Research of the State Planning Commission, Moscow.

abandoned the policy of War Communism, which had been necessitated by the state of siege, and adopted the New Economic Policy. The first task under the New Economic Policy was the rapid restoration of heavy industry. This was to be accomplished on the basis of the revival and restoration of the productive forces in agriculture.

The Soviet Government - in permitting the peasants to sell their surplus products as a means of stimulating the development of productive forces, and in establishing the market form of relationship between industry and peasant agriculture - was fully aware that this would inevitably stimulate the growth of certain capitalist elements in the spheres of production and distribution But this inevitable growth of capitalist relationships was counteracted by the restoration and strengthening of state industry and by the establishment of direct economic ties between state industry and peasant economy through the cooperative system. These measures, together with the policy of supervising and restricting the capitalist elements, aimed at the elimination of private capitalist forms of economy and the development of socialist relationships.

The Soviet Government calculated that, by restoring and strengthening heavy industry as the economic basis for socialism, by gradually carrying out the electrification plan adopted by the Sixth Congress of Soviets at the end of 1920, and by drawing the majority of the peasants into collective farms, it would be laying the foundation for the social-technical reconstruction of the entire national economy, for the development of a powerful socialist industry, and for the creation of large-scale socialist agriculture.

Such was the plan for socialist construction, drawn up in its broad outlines, under the gifted leadership of Lenin, at the time of the introduction of the New Economic Policy. This plan became the basis for the economic policy of the Soviet Government and determined the character and rate of development of Soviet national economy.

The period from 1921 to 1926 was devoted to the restoration of national economy, including industry, agriculture, transportation, commodity turnover, and currency circulation.

During this period the output of census industry increased more than five-fold from 1,772 million rubles in 1921 to 9,120 million rubles in 1926 (at 1926-27 prices).

As regards agriculture, the sown area in 1927 was 279 million acres, as compared with 281.5 million acres in 1916. The total number of large horned cattle in 1925 exceeded the 1916 total.

The rapid rate attained in the restoration of industry was closely connected with and, at that stage, largely dependent upon, the rate of restoration in agriculture. The central problem was working capital, raw materials, food supplies and money. In 1921 the Soviet Government, having at its disposal an industry with a basic capital of 4.7 billion pre-war rubles, was confronted with the task of starting up the idle factories and of increasing the output of those factories which were operating below capacity. The necessary supplies of food and raw materials were obtained by restoring the productive forces of agriculture. At the same time, by increasing the output of the factories and the productivity of labor, the task of creating a sound basis for the growth of accumulation in state industry was solved, particularly in those industries which produced consumers' goods. The stabilization of the currency and the development of a credit system solved the problem of currency circulation and enabled national economy in general and industry in particular to obtain the necessary short term credits.

The strengthening of the state budget permitted the introduction of measures for the revival and development of heavy industry. As a result, capital investments in industry - which in 1921 and 1922 amounted to a few tens of million of rubles, sums even insufficient to cover depreciation - rose by 1925-26 to 811 million rubles.

Despite the extremely severe damage sustained during the imperialist war, counter-revolution, and intervention, the Soviet Union was able to restore its economy much more rapidly than a number of European countries which had suffered much less from the world war. It is worth noting that the Soviet Union was one of the first countries to place its currency upon a sound

basis. It must be emphasized that the national economy of the Soviet Union was restored at this rapid rate by its own forces and its own means without the aid of foreign credits.

Soviet economy has certain important advantages: private ownership of all the principal means of production, including land, has been abolished; the main resources of the country are concentrated in the hands of a single owner, the proletarian government; and the distribution of these resources is planned. These advantages already became apparent in the restoration period.

As early as the time of the introduction of the New Economic Policy the question of planned development of the restoration process was sharply put. The State Planning Commission was assigned the task of estimating all the food and fuel resources of the country and, on the basis of this estimate, of ascertaining which state enterprises could be set in operation at full capacity, which enterprises should be leased out and which should be temporarily kept in reserve.

Plans were also drawn up for various branches of industry, for budgets, for agricultural credits, etc. However, it should be noted that the growth of market relationships and the decline in the value of the ruble during the early stage of the New Economic Policy were unfavorable for the development of planning in national economy. The calculation of market factors played an important role in drawing up plans. Planning was regarded as an instrument for controlling the anarchy of the market and subordinating it to the control and regulation of the state.

Later, with the stabilization of the currency, the strengthening of state industry and the trading and cooperative system, the basis for planning was sufficiently solidified to permit the transition from planning for individual branches of industry to drawing up a single plan for the whole of national economy. Such a single plan was first formulated in the so-called control figures of national economy for the fiscal year 1925-26. It must be emphasized here that - despite the imperfection and incompleteness of the plan, which did not cover all sections of the

national economy - its influence on the restoration of economic life was nevertheless decisive.

INDUSTRIALIZATION.

As the restoration of the national economy progressed, the policy of industrializing the Soviet Union acquired greater and greater importance. The effects of this policy were already strongly felt at the end of the restoration period. Thus, in 1924, the output of producers' goods (group A) increased 24 per cent and that of consumers' goods (group B) 39 per cent; in 1925-26 the output of producers' goods increased approximately at the same rate as that of consumers' goods, namely, 34-35 per cent. In the subsequent years the output of producers' goods increased at an even greater rate than that of consumers' goods. This increased rate in the output of producers' goods was facilitated by the policy pursued of allocating a much larger share of the capital investments to those branches of industry producing such goods. The distribution of capital investments between groups A and B is indicated in the following table:

	1925—26	1926—27	1927—28
		(in million rubles)	
Group A	491.4	737.2	969.0
Group B	178.6	194.0	268.1
All Industry	670 0	931 2	1.237.1

A decisive factor in the further development of Soviet economy was that the restoration process was not based upon a restoration of pre-war conditions or proportions as among the various branches of the national economy. The direction of development was determined by the general plan for socialist construction, known as the Five-Year Plan. The pre-war level of production was reached on the basis of new relations among the various branches of industry. Thus, in 1926-27 a total of 91.3 per cent of industry covered by the census was state industry, 5 per cent was cooperative industry, and only 2.3 per cent was private capitalist industry. Railway transportation was completely in the hands of the state. The credit system was also in the hands of the state. Furthermore, in

1926-27 more than 80 per cent of the total commodity turnover was carried on by state and cooperative trading organisations. And, finally, the middle peasant, the peasant who did not exploit hired labor, became the central figure in agriculture. In 1927 the middle peasant's share of the total sown area amounted to 71.6 per cent, of the working horses to 80.7 per cent, and of the marketable output to 71 per cent. Despite a small increase in the capitalist elements in city and village, their weight in the national economy as a whole steadily declined.

The capitalist elements had their strongest hold in agriculture. At that time the predominance in agriculture of the system of small-scale production fostered, to a certain extent, the growth of capitalist relations. However, the development of agriculture was not isolated from the development of industry. The direction of the development of the small peasant village was determined by the development of the socialist city. Opposed to the capitalist elements in the village were not only the toiling masses in the village itself but the whole system of the dictatorship of the proletariat, with its powerful key positions in national economy (primarily socialist industry) and with the cooperatives and other levers for planned influence upon agriculture. In the last resort it was these factors which determined the fate of the capitalist elements in Soviet agriculture.

THE TEMPO OF INDUSTRIALIZATION AND THE RECONSTRUCTION OF NATIONAL ECONOMY.

The transition from the restoration period to the reconstruction period occurred at the time when state industry and the other socialist key positions became the decisive factors in national economy, when state and cooperative trading comprised the overwhelming share of the general commodity turnover of the country. The socialized sector played the leading role in national economy; its expansion determined the general direction of economic development.

In the transition to the reconstruction period the basic industrial enterprises were working at full capacity. In this connection a number of bourgeois economists, who were later discovered to be plotting against Soviet industry, advanced the theory of the

"descending curve". They argued that, as a result of the exhaustion of its basic capital, Soviet industry would in the future develop at a diminishing rate. Despite this "theory", state large-scale industry, having entered the period of reconstruction, continued to develop at an unprecedented rate, as indicated in the following table:

	Total	Per cent increase over previous year	Group A	Per cent increase over previous year	Group B	Per cent increase over previous year
	(in million rubles, at 1926—27 prices)					
1927	10,767.6	18.1	4,865.8	25.2	5,901.6	12.7
1928	13,669.0	26.9	6,152.0	26.4	7,517.0	27.4
1929	17,322.0	26.7	8,001.0	30.1	9,321.0	23.9
1930 (estimate)	22,488.0	29.8	11,402.0	42.5	11,086.0	18.9

It is clear from the above table that the highest rate of development has been recorded by heavy industry (group A).

The character of industrialization in the Soviet Union is indicated not only by a comparison of the growth in industry with that in agriculture, but by a comparison of the growth in industries which produce producers' goods with those industries which produce consumers' goods. In 1926 the output of producers' goods constituted 42.4 per cent of the total industrial output; in 1930 50.3 per cent, and in 1931, according to the program, the percentage will be 58.7.

The relation of the output of census industry to that of agriculture is as follows:

	1926	1928	1929	1930	1931 (program)
	(in per cent)				
Census Industry	47.1	51.1	57.9	62.7	67.3
Agriculture	52.9	48.9	42.1	37.3	32.7
	100	100	100	100	100

Before the war the output of industry constituted 42.1 per cent of the total output of national economy; in 1927-28 it rose to 45 per cent; and in 1929-30, to over 50 per cent. From an agrarian-industrial country the Soviet Union is being converted

into an industrial-agrarian country. At the same time, agriculture is undergoing a fundamental change.

Industry developed rapidly first of all in such branches as the metallurgical, machine-building, and electrical industries. The rate of development in the main branches of Soviet industry is indicated by the following table:

		1913	1926	1927	1928	1929	1930
Output of electric power	Mill. kw. hr.	1,945.-	3,507.-	4,173.-	5,003.-	6,386.-	8,231.-
Production of:							
Pig iron	thous. ton	4,210.0	2,269.1	3,049.7	3,375.0	4,346.8	5,017.0
Steel ingots	"	4,250.0	2,900.0	3,584.0	4,272.0	4,907.0	5,676.0
Rolled steel	"	3,509.0	2,200.0	2,880.0	3.500.0	3,967.0	4,598.0
Coal	"	28,900.0	26,044.2	32,332.6	35,808.4	41,668.4	47,050.1
Oil	"	9,300.0	8,821.3	10,956.5	12,315.9	14,477.0	18,621.8
Agricultural Machinery	Mill. rubles	67.0	144.6	181.7	244.1	328.5	486.2
Electrical Industry	"	45.1	70.6	102.2	138.9	207.1	364.1

In estimating the successes of Soviet industry, it is necessary to keep in mind the important structural changes it has undergone. Industry is organizing, with extraordinary rapidity, complicated production processes and strengthening thereby its independence; it is producing 50,000-kilowatt steam turbines, immense, Diesel engines, powerful transformers, electric locomotives, tractors and combines, high quality steel, various ferro-alloys, and so on. This rapid process of expanded production has been realized by means of increased capital investments, and has been accompanied by an increase in the number of workers and in the productivity of labor, as shown in the following table:

	1926	1928	1930	1931 (program)
	(in mill. rubles, prices of respective years)			
Capital investment in the basic capital of the socialized sector	2,255	4,115	10,288	17,624
In industry	942	1,703	4,002	6,694
In transport	529	915	1,638	2,884
In regional power plants	72	176	389	850
In agriculture	118	343	2,187	4,317

As has already been pointed out, the greater part of the capital invested in industry went into heavy industry. These capital investments were used both for the development and re-equipment of factories in operation and for building new plants. Capital investments in industry (including the electric power plants) were allocated as follows:

	New Construction	Expansion & Re-equipment	Capital Repairs
		(in per cent)	
1926—27	13.9	73.6	12.5
1927—28	26.9	62.4	10.7
1928—29	35.2	57.1	7.7
1929—30	45.1	48.0	6.9

Every year there has been an increase in the amount of new construction. As a result of these capital investments, there has been a large annual increase in the basic capital funds. Thus, in 1931 the basic capital in industry increased approximately by two billion rubles as against an increase of 1.45 billion rubles in 1930. During the period from 1927 to 1930 a total of 323 plants were put into operation. In 1931 a total of 518 new plants will be put into operation, including a number of gigantic enterprises, such as the Magnitogorsk metallurgical works, the Kharkov tractor plant, and the Nizhni Novgorod automobile plant. The general increase in basic capital in the national economy is indicated in the following table:

	Beginning 1928	End 1928	End 1929	End 1930	End 1931 (program)
	(in mill. rubles, prices of respective years)				
Industry & Electric Power Plants	5,652.1	6,247.7	7,210.1	8,453.4	12,494.2
Industrial & Dwelling Construction	983.6	1,113.4	1,264.1	1,509.0	1,965.9
Transport	10,520.8	10,685.3	11,004.9	11,964.4	13,304.4
Trade	425.9	480.5	615.5	948.3	1,432.4
Agriculture	18,221.4	18,735.3	19,688.0	21,846.4	24,483.6

The rate of development of Soviet national economy on the basis of socialist industrialization is characterized by the rapid increase in the number of wage-earners, particularly those employed in census industry. In 1923-24 the number of wage-

earners (excluding agricultural workers) amounted to 5,843,000; in 1926-27 to 8,866,000; in 1930 to 12,429,000; while in 1931 it is expected to total 13,713,000. This extremely rapid growth of socialist planned economy has enabled us completely and irrevocably to eliminate unemployment, the scourge of the capitalist system. In census industry the number of workers increased from 1,535,000 in 1923-24 to 2,439,000 in 1926-27. By January 1, 1931, the total had risen to 4,229,000.

At the same time there has been a great increase in the productivity of labor. Daily output per worker is given in the following table:

1922	1923	1924	1925	1926	1927	1928	1929	1930
				(in rubles)				
6.8	8.6	9.4	11.9	15.1	17.1	19.8	22.4	26.2

The steady increase in the productivity of labor resulted in a decline in the cost of production of industrial goods, the decline for the period between 1924-25 and 1930 being estimated at about 29 per cent. This resulted in an increase in the profits of industry from 380 million rubles in 1924-25 to 1,700 million rubles in 1930. At the same time, wholesale prices declined 12 per cent. The increase in the productivity of labor is one of the most important results of socialist planned economy and of technical reconstruction. It is based upon the electrification of the country, the increased mechanization of labor, and the new attitude of the workers themselves toward labor as expressed in socialist competition and the shock-brigade movement. It is a result of what Lenin called the "new organization of labor" in the Soviet Union, which "combines the modern achievements of science and technique with the mass amalgamation of the socially conscious workers participating in large-scale socialized industry."

The extent of scientific and technical initiative in the Soviet Union is indicated by the enormous increase each year in workers' inventions and in suggestions presented by the workers for rationalizing industry, by the wide range of scientific research in all branches of economy, and by intensive work toward standardization. For example, out of 63,000 suggestions

made in 1929-30 in ten industrial enterprises, 46,000 were adopted, resulting in a total saving of 20 million rubles.

In addition to the growth in basic capital, important factors in the increase of production have been the systematic improvement in the utilization of this capital, the increased number of working shifts in the factories, and the introduction on a general scale of the continuous working week. The effective manner in which the basic capital has been utilized is indicated by the fact that in 1913 for every 1,000 rubles of basic capital, gross output amounted to 1,355 rubles; in 1926-27 to 1,578 rubles; and in 1929-30 to 2,355 rubles.

The capitalist countries, such as England, France, Germany, and the United States, accomplished the process of industrialization to a large extent with foreign resources and upon an entirely different social and economic basis. The Soviet Union, on the other hand, is solving the problem of industrialization almost exclusively with the aid of its own resources. In accomplishing its ends it not only is without any aid from abroad worth mentioning, but surrounded by hostile and aggressive capitalist nations.

AGRICULTURE.*

While state large-scale industry developed at an unprecedented rate, the situation was different as regards the development of agriculture. As a result of the November Revolution and War Communism, of the abolition of the large landed estates and the equalizing of the size of peasant farms, the small peasant farm became the predominant type in Soviet agriculture. The number of peasant farms increased from 21 million in 1916 to 25 million in 1927, an increase of 19 per cent. The area under cultivation in 1927 was only a little larger than the pre-war area; the number of horses was 84 per cent of the pre-war figure, and the number of cows 115 per cent. A parcelling out of farms had taken place.

When the restoration period had come to an end, the extremely

* The development of agriculture in the Soviet Union is dealt with in greater detail in a special paper submitted to the World Social Economic Congress and published elsewhere in this book.

limited possibilities of developing agriculture on the basis of small, individual peasant farms - especially as sources of supply for the market - became only too obvious. The extremely slow growth of agriculture as compared with the rate of development in industry became a source of difficulty, especially in regard to obtaining the necessary supply of food and raw materials for the rapidly growing cities and industries. The following figures indicate the rate of development in industry and agriculture:

	1927	1928	1929	1930
Gross output of state large-scale industry (in mill. rubles, at 1926/27 prices)	10,767.7	13,669.0	17,322.0	22,488.0
Per cent increase over previous year	18.-	26.9	26.7	29.8
Total sown area (in mill. acres)	278.6	294.4	316.2	318.9
Per cent increase over previous year	—	5.6	7.4	0.9
Number of large horned cattle	68.3	70.5	67.1	—
Per cent increase over previous year	—	3.2	—4.8*	—

* Decrease.

The small peasant farms had exhausted all possibilities of development. Further agricultural development could be secured only by a radical social and technical reconstruction of agriculture, by a transition from small-scale farming by individual peasants to a method of agriculture which would be more effective both for the peasants themselves and for the national economy as a whole, namely, large-scale collective farming on a new technical basis and, at the same time, by the organization of large-scale state agricultural enterprises - state farms. The factors required for carrying out this task, which is unprecedented in the history of mankind, were present. These factors included: achievements in the field of socialist industrialization; increased production of agricultural machinery; growth of the agricultural cooperatives and of their influence upon agricultural production; growth of the system of "contracting" for agricultural crops; the successful development of state and collective farms, which served as a most convincing proof of the enormous advantages of large-scale socialized production in agriculture; the intensified "socialist offensive" against the kulaks; and the better organization of non-bourgeois peasants in support of the state grain collec-

tions. These factors - which had been in force for several years and were incorporated in all the plans for economic reconstruction - combined with the absence of private ownership in land - resulted in certain radical changes in agriculture. Many millions of peasants took the new road toward socialized farming, which has opened a new era in the development of Soviet economy. The process of collectivizing the peasant households, which had increased its tempo considerably in 1928, developed at an unprecedented rate in 1929 and 1930. By the middle of 1931 the collective farms embraced more than 57 per cent of the total number of peasant households.

The great achievements of Soviet agriculture in the past few years, especially the excellent results of the 1931 sowing campaign, have been due primarily to the successes achieved in collectivization. It is important to keep in mind that the 1931 sowing campaign, as well as the development of agriculture in general, comes under the direct supervision of the Five-Year Plan. This direct planned control of agriculture is one of the characteristic features of the new stage upon which Soviet national economy has entered.

The successful development of agriculture has led in the second half of 1931 to a new and rapid increase in the output of light industry, especially of textiles, sugar, etc. It has solved the grain problem once and for all. It is creating the factors necessary for solving the livestock problem, which has been so acute during the last two or three years. The success achieved in the socialist reconstruction of agriculture is gradually eliminating the disparity which previously existed between the rate of industrial development and the rate of agricultural development. At the same time, on the basis of mass collectivization, the Soviet Government is eliminating the kulaks as a class. It is thus abolishing the last stronghold of capitalism in the country and thereby achieving the final victory over hostile economic systems and classes in the Soviet Union.

The steady growth of the national economy of the Soviet Union, with its vast territories covering one-sixth of the earth's surface, necessitated a corresponding rate of development of transpor-

tation, particularly of the railways. As a result of the devastation wrought by the world war and intervention, railway transportation was in a deplorable state during the early years of the New Economic Policy. Even as late as the end of 1924, out of a total of 20,300 available locomotives, less than 13,000 were in use, i. e., only 63 per cent, and of these only 9,400 were in repair.

Nevertheless, by 1926-27 the railway freight turnover considerably exceeded the pre-war figure. During the subsequent years the turnover increased at an even more rapid rate, reaching 238 million tons in 1930 as against 136 million tons in 1926-27. If we compare the railway freight turnover in 1930 with that in 1913, the increase for the Soviet Union amounts to about 80 per cent, for Germany and England to approximately 15 per cent, and for the United States to only 4 per cent. As regards railway freight operations, the Soviet Union in 1930, with a total of 133 billion ton-kilometers, occupied second place, being exceeded only by the United States. Furthermore, the relative position of the Soviet Union in world freight turnover, has risen from 4.4 per cent in 1913 to 7.4 per cent at present. Passenger operations on Soviet railways in 1930 totalled 52 billion passenger kilometers, or 208 per cent above the pre-war level. By this total the Soviet Union won first place in the world as regards railway passenger operations.

It would be useful to point out a few facts which characterize Soviet freight turnover from the standpoint of the territory covered and the character of the goods transported. Transportation along the eastern lines (Siberia-Urals, Kazakstan, etc.) has developed much more rapidly than throughout the Soviet Union as a whole. The rapid rate of development in the industrialization of the eastern regions has been reflected in the construction of mighty industrial combines, such as the Ural-Kuzbas Combine. It is these regions which are to a large extent responsible for the 12,800 kilometers of new railway lines constructed by the Soviet Government. Indeed, the very character of the freight transported reflects most clearly the whole process of Soviet industrialization. At present, the share taken by heavy industry in freight transportation is three and one-half

times as great as in 1913; that taken by the machine-building industry is four and one-half times as great; that by the fuel industry four times as great; while that taken by light industry and agriculture shows an increase of from 74 to 86 per cent.

Capital investments in railway transportation are primarily dependent upon the development of the metallurgical and machine-building industries, and have only in recent years amounted to any considerable sum. The railway system has been able to cope with the demands made upon it by the rapid development of national economy thanks only to the systematic rationalization of transportation. This consisted, first and foremost, in planning the movement of goods on the railways, as far as possible eliminating duplication in the transportations of goods of the same kind to and from the same region. In other words, the railways have been able to cope with their tasks thanks only to the existence of planned economy.

The following data indicate the gain in efficiency of railway transportation: The average daily run of a freight car in 1931 was estimated at 93.4 kilometers as against 72 kilometers in 1913; the average daily run of a freight locomotive at 153 kilometers as against 119 kilometers. The coefficient of overhead costs on the railways fell from 84 per cent in 1926-27, to 52 per cent in 1930

The backwardness of the railways as regards technical equipment and the sharp disparity between the extremely enhanced demands of national economy and the material means for meeting these demands have accentuated the importance of radically reconstructing the technical basis of railway transportation along the lines already begun.

COMMODITY TURNOVER.

In industry and transportation the Soviet Government inherited considerable basic capital from Tsarist Russia, but as regards trade the situation was incomparably worse. Trade facilities were extremely undeveloped and unequally distributed throughout the country. In Tsarist Russia about 94 per cent of the turnover of industrial goods and over 68 per cent of the total

number of commercial and industrial enterprises were concentrated in districts which included only 24.8 per cent of the total population. All the rest of European Russia, containing about 75 per cent of the population, as well as the Asiatic part of the Russian Empire, had only 6.2 per cent of the turnover of industrial goods. The supply of goods to the distant regions of European Russia amounted approximately to two kopeks a year per capita. The supply of goods to the Asiatic part of Russia was even smaller.

In 1926 the turnover of goods throughout the country already exceeded the pre-war level by 10 per cent. In 1925-26 the turnover of commercial goods amounted to about 30 billion rubles; in 1929-30 the total was almost 65 billion rubles. In 1930 the total turnover of goods throughout the country was three times as great as before the war. During the past three years the turnover of goods per capita of the population has doubled, as against an increase of only 40-45 per cent during the thirteen pre-war years from 1900 to 1913.

Retail turnover in 1925-26 was over 12 billion rubles; in 1926-27 it had risen to 13.5 billion rubles; in 1927-28 to 15 billion rubles; in 1928-29 to 16.7 billion rubles; and in 1929-30 it had reached 19.3 billion rubles. The program for 1931 sets retail turnover at 27 billion rubles, an increase over 1925-26 of 130 per cent.

The considerable growth in retail turnover is due to a steady increase in the amount of consumers goods and to the increased output and collection of agricultural products. For example, during the period from 1928 to 1931 the output of clothing and toilet articles increased 250 per cent; that of leather shoes 240 per cent; and in the past two years the sugar output has increased 80 per cent. In 1929-30 grain collections showed an increase of 47 per cent over the 1928-29 collections. In the sphere of commodity turnover one of the most important elements of the economic plan has been the so-called "contracting" system, whereby the state and cooperative trading organizations make advance contracts for the output of the peasant farms.

Despite the rapid growth of industrialization and the considerable capital investment in heavy industry, there has been a shortage of various articles of general consumption. This has been

chiefly due to the slow development of small-scale agriculture as compared with the development of industry, and to the extraordinarily rapid rate at which the cultural level of both the urban and rural population has been rising. The achievements attained in the social and technical reconstruction of agriculture fully convince us that these difficulties will be completely eliminated in a short time. The planned organization of commodity turnover will enable the proletarian state to distribute the supply of consumers' goods in such a way as to furnish at least the industrial workers with goods in an amount equivalent to the income of these workers.

Consumers' cooperatives at present handle 76 per cent of the total retail turnover of the country. In 1931 the retail turnover of the consumers' cooperatives showed an increase over 1930 of more than 50 per cent in the cities and of 29 per cent in the villages. The increase varied considerably according to region. In the Northern Caucasus and in the Bashkir Republic there was an increase of 40 per cent, in the Yakut Republic 62 per cent, and in the Kirghiz Republic 144 per cent. Thus, the greatest increase in commodity turnover has been in those outlying regions and republics inhabited by the minor nationalities where, prior to the war, there was practically no commodity turnover at all. As regards the territorial distribution of goods, the processes of industrialization and collectivization throughout the country and the general policy of the Soviet Government are also clearly expressed.

This expansion in commodity turnover has been achieved on the basis of the rapidly advancing socialization of trade, involving the growth of cooperative and state commerce and the elimination of private capital in the sphere of trade. The course of the struggle between the socialized and private sectors, between planning and anarchy in the marketing of goods, is indicated by the following table:

Years	Share of Socialized Sector in:			Share of Private Sector in:		
	Wholesale Trade	Retail Trade	Total Trade	Wholesale Trade	Retail Trade	Total Trade
	(in per cent)					
1923/24	82.0	35.5	55.1	18.0	64.5	44.9
1924/25	91.5	52.0	72.0	8.5	48.0	28.0
1925/26	92.6	59.8	78.1	7.4	40.2	21.9
1926/27	95.5	63.7	83.1	4.5	36.3	16.9
1927/28	98.2	74.6	89.8	1.8	25.4	10.2
1928/29	99.6	84.0	94.9	0.4	16.0	5.1
1929/30	100.0	93.5	98.1	—	6.5	1.9

It is worth noting that at the beginning of 1931 more than 67 per cent of the entire adult population of the Soviet Union were members of cooperatives. This is characteristic of the development of the Soviet cooperative trading system. By July, 1931, the entire adult population over 16 years of age was organized in the cooperative movement in the towns. At the beginning of 1931 the number of shareholders in the cooperatives was 63 million, as against 12.4 million in 1926, an increase of over 400 per cent during the course of five years.

The struggle for the socialization of trade, for placing this sphere of the country's economic life under the control of the planning system, constituted one of the most important factors in the struggle for the Plan, for socialism as against capitalism. At first the problem was to gain possession of the connecting link between town and village, between the socialized economic key positions and the millions of small peasant farms. This connecting link, or "smychka", was, until very recently, maintained primarily through trade. The struggle had for its aim the increased welfare of the masses, chiefly by means of a steady decline in prices.

From 1927 to 1930 the decline in the general index of retail prices in the urban consumers' cooperatives (which during that period handled about 80 per cent of the goods purchased by workers) was about 8 per cent; the decline in the prices of industrial goods was approximately 12 per cent. In the villages the total drop in cooperative prices was about 10 per cent. Investigations of household budgets show that in 1930 the pri-

vate trader supplied to the working population from 0.5 per cent to 2.5 per cent of the total amount of goods purchased (not including animal products). The development of state and collective cattle farms will in the near future reduce the role of the private trader to a minimum in this sphere, as it has already been reduced as regards grain.

At present the private market in the Soviet Union plays a very insignificant role. As a result of the success of collectivization the private market has been deprived of its base for food supplies, and is consequently in a state of collapse. The private trader and speculator has been eliminated from serious competition by the powerful development of the socialization process. Today he is confined to the local markets; he has nothing to expect from the future; he can only live from day to day. The slightest changes in supply and demand immediately hit the private market, greatly enhancing prices. These reactions become more intense as the private trader's sphere of activity contracts. Incidently, it is extremely naive, to say the least, to imagine that currency circulation is responsible for this feverish movement of prices on the private market.

Years of experience in planned economy in the Soviet Union have shown that the reapportioning of productive forces according to plan and social aim, the beneficial planning of production and construction, imperatively require a corresponding planned organization of commodity turnover. The so-called "selling crisis" in 1923 clearly demonstrated that planned economy (then still in an early stage of development) with its centralized, efficient control over the chief resources of national economy, which had been freed from the fetters of private ownership, is able simply and painlessly to deal with all difficulties which arise in the course of economic development. On the other hand, experience in the regulation of prices in private trade clearly indicates the futility of such regulation and the infeasibility of planning private capitalist economy.

The enormous advantages of the planned organization of commodity turnover are quite obvious in regard to the reduction of overhead costs. Soviet trade carries on a systematic struggle for smaller expenditure in connection with the circulation of

goods, for a reduction in the costs of transferring goods from the producer to the consumer. At the same time, great efforts are being made to improve the services of the stores to the working masses in the cities and villages. The result of this is a saving of many millions of rubles, which, under the Soviet system, opens up additional resources for increasing the rate of development of national economy.

The transportation of goods is planned with a view to reducing to a minimum the distance goods are transported. On the basis of the plan for commodity turnover, the network of trade and warehouses is distributed over the whole country in the most rational manner possible. The planned organization of commodity turnover eliminates the enormous waste involved in a chaotic transportation of goods, such as results from the anarchy and competitive struggle inherent in capitalism, a chaos which lays additional heavy burdens upon the working class and the toiling masses in general. Some idea of this waste may be gleaned from the fact that expenditure for advertising in the United States in 1927 amounted to more than 1.6 billion dollars. The total expenditure in the United States for public health and hospitals (the so-called free social services) was only 11 to 12 per cent of the total amount spent for advertising. In view of this it is not surprising that the commercial overhead costs of several articles of consumption amount to 50 per cent or more of their retail price. Commercial overhead costs in the turnover of commodities in the Soviet Union are incomparably lower than the corresponding expenditures in capitalist countries. In 1930 the total overhead costs of the consumers' cooperatives in the Soviet Union, which handle more than 80 per cent of the retail turnover, amounted to only 1.5 billion rubles or to less than one-half of the estimated expenditure of American commerce on advertising alone. All expenses connected with the turnover of the consumers' cooperatives constitute at present about 12 per cent of the retail price. Consequently, in the Soviet Union the ratio of overhead costs in commodity turnover to the total retail price is only one-third of that in the United States.

FINANCE.

The transition to the New Economic Policy was accompanied not only by a rapid expansion of the national economy in general but also by great progress in the development of the financial system of the Soviet Union. In the sphere of finance the work during the first few years of the NEP (New Economic Policy) consisted chiefly in consolidating the financial system, in creating a stable currency, and in organizing a budget and credit system. At that time the planning of budgets, credits, and finance in general was far from systematic. In 1922-23, and to a certain extent in 1923-24, the budget was drawn up under conditions of a depreciating currency. Contributions in kind to the budget were finally abolished in 1923-24, and the first fixed annual budget was drawn up in 1924-25.

In 1922-23 the emission of new currency provided the budget with 394 million rubles, or 26.9 per cent of the total revenue, but in 1924-25 the budget was balanced without resorting to emission of currency. This constituted a great achievement not only for the budget but for the whole of Soviet national economy. The cessation of emission and the stabilization of the reformed monetary unit (the chervonetz was first issued in the autumn of 1922 and replaced paper money entirely by the spring of 1924) served as the determining factors in financial planning and in the organization of finance.

The state budget of the Soviet Union rose from 2.4 billion rubles in 1923-24 to 21.8 billion rubles in 1931, that is, in the course of the past seven years it has increased 800 per cent.

During these years taxes provided about half of the revenue. The growth of the socialized sector of national economy is indicated by the increase in its share of the tax payments. In 1924-25 state and cooperative enterprises paid a little over 50 per cent of the total taxes; in 1931 they paid almost 90 per cent.

In considering the importance of indirect taxation in the Soviet Union, it is necessary to keep in mind that the social structure of the Soviet national income differs completely in principle from that of the capitalist countries. In the Soviet Union there are no large fortunes and the income of the population has been

relatively equalized. This has converted the excise tax from a regressive form of taxation, constituting a much heavier burden for the poor than for the rich, into a form proportional to the income of the taxpayer. By means of differentiated excise tax rates, such as especially high taxes on luxury articles, indirect taxation has been converted into a fairly reliable instrument of the proletarian taxation policy. Among other measures which lessen the burden for those with lower incomes, are progressive direct taxes and class differentiation in the payment of rent. Furthermore, taxation has proved to be a means for restricting undesirable consumption, primarily of alcohol, since the prohibition of the sale of alcohol in a country with a large peasant population has been found ineffective. At present the tax on alcohol amounts to 93 per cent of the price. This high tax has made it possible to reduce the average per capita consumption of alcohol to 60 per cent of the pre-war level. A characteristic feature of the tax system of the Soviet Union should be noted, namely, the utilization of taxes in a planned way for the redistribution of capital, both among the various branches of socialized economy and within the framework of each individual branch.

The tax reform of 1930 was of considerable importance for the improvement of financial planning and for simplifying tax collections and reducing their costs. Under the new system as many as 55 separate taxes levied upon the socialized sector of economy were united into a single turnover tax, payable to the central government.

In considering the burden of taxation and in analyzing accumulation in socialized economy, one important difference between Soviet and capitalist taxation must be borne in mind. Taxation in the Soviet Union carries out a special function as one of the sources of financing the national economic plan. Under capitalism the greater part of the revenue from taxation goes for the upkeep of the government apparatus and the army. An analysis of the revenues and expenditures in the Soviet federal budget for 1931 shows that out of a total revenue of 10.8 billion rubles, 6.3 billion rubles were spent on financing national economy and

the past seven years have increased 700 per cent. Less than 7 per cent of the Soviet budget is spent on defense, as compared for example, with France, which spends 50 per cent of its budget on defense, including war pensions, etc. Only 2 per cent of the national income is spent on defense in the Soviet Union, while in France, even according to official figures, 4.5 per cent of the national income is spent on defense.

In the Soviet Union 3 per cent of the national income is spent on government administration and the army, compared with 9.3 per cent in pre-war Russia and 5.5 per cent in Great Britain.

The federal budget of the Soviet Union is a combined budget consisting of the budget of the Soviet Union as a whole and of the individual budgets of the seven autonomous republics. By means of this combined budget steadily increasing funds are transmitted year after year to the more backward republics. The growth of the budgets of the Central Asiatic republics, the Caucausian Federation, and the White Russian Republic is the best illustration of the Soviet Union's policy regarding minor nationalities.

The local budgets receive from year to year an ever greater volume of support from the federal budget. The local budgets have increased from 650 million rubles in 1923-24 to 3.8 billion rubles in 1931. Most of the expenditure of the local budgets is for cultural and economic purposes. Thus, out of the total local budgets of 3.8 billion rubles in 1931, a total of 1.8 billion rubles has been appropriated for cultural purposes and 1.2 billion rubles for economic purposes. The fundamental principle of Soviet economic organization is the centralization of planning and the decentralization of administration. This is clearly expressed in the development of local initiative in the sphere of local finances.

Apart from the budget, one of the most important places in the organization and planning of Soviet finance is occupied by the c r e d i t s y s t e m, headed by the State Bank, which is the central Soviet institution for issuing currency. The Soviet credit system is one of the most important instruments for planning and regulating national economy. It concentrates all the financial

resources mobilized under the Plan and redistributes them along the lines indicated by the Plan. It is the focal point of economic connections, the central clearing house and the organized, centralized cash reserve of socialized economy. It is a sensitive barometer of economic life; it marks the extent to which the Plan has been carried out in each section of national economy, it indicates the measures which must be taken under the Plan for guaranteeing the continuity of the economic process.

The fundamental task of the Soviet credit system is, of course, to assist the development of national economy by means of credit; but, in addition, the Soviet credit system, since its establishment in 1921-22, has faced another and equally vital task, namely, the introduction of elements of sound finance into the economic relations of all enterprises in the socialized sector of national economy. The credit system has played an extremely salutary rôle in bringing order into the economic life of Soviet institutions, enforcing proper methods of calculation, bookkeeping, and accounting. This organizational rôle of the credit system continues to be important at the present stage of development, when the task of accurate accounting, under new circumstances and in new forms, is a vital question in all branches of national economy.

The rapid growth of all branches of national economy has been accompanied by a rapid development of the credit system. The resources of the credit system increased from 838 million rubles on October 1, 1923 to 6.3 billion rubles on October 1, 1927, and to 9.5 billion rubles on October 1, 1930. The basic capital of the credit system increased from 156 million rubles in 1923 to 1.4 billion in 1930. Short-term discount and loan operations increased from 410 million rubles in 1923 to 6,350 million rubles on October 1, 1930; long-term credits increased from 132 million rubles to 4.3 billion rubles.

The p l a n n e d distribution of these enormous resources among the decisive sections of national economy, primarily in industry, is one of the most important factors in the development of Soviet economy.

The planning of credit came much later than the planning of the other branches of national economy. Yet even the first steps

taken in this direction were quite successful. For example, the quarterly credit plans in 1924-25 were fulfilled to the extent of from 99.2 per cent to 108.4 per cent and in 1925-26 from 95.6 per cent to 99.6 per cent. With the growth and consolidation of socialized economy and with the perfection of the methods of planning, this extremely important sphere of economic relations was also put on a planned basis. The abolition of commercial credit and the transition to direct bank credit, as a result of the reform of the credit system in 1930-31, has raised financial planning to a new and higher level.

This credit reform, made possible by the rapid growth of the socialist elements in the national economy and by the level of planning which had been reached, in turn assisted in inculcating and intensifying the principle of planning in Soviet economy. It greatly simplified the relations between economic organizations and the credit system as well as the relations of the various economic organizations among themselves. The decisive factor which will assure the proper functioning of the new relations created by the credit reform is the strengthening of socialist economic efficiency, which is one of the tasks at present confronting economy.

With the introduction of the credit reform and the concentration of all short-term credits in the State Bank, the latter was converted into a single clearing house for the whole of Soviet national economy. The State Bank concentrates and regulates all the financial relations of the economic organizations, the financial institutions, and the special banks. These special banks at present handle only long-term credits and finance industrial construction, agriculture, the cooperatives, and the municipal services.

One of the most important items in planning national economy, is the planning and regulation of currency circulation. The planning of the entire economic process makes it possible to control and direct currency circulation according to plan.

In order to understand the situation as regards currency circulation in the Soviet Union, it is necessary to compare the variations in the amount of currency in circulation with the

development taking place in the fundamental branches of the national economy. In 1931 the amount of currency in circulation was over three times as great as in 1925-26, an increase about equal to that in industrial production, commodity turnover, and railway freight traffic. Whereas the amount of currency in circulation in the Soviet Union is at present about 78 per cent in excess of the pre-war amount, industrial production in 1931 is almost three times pre-war production, railway freight traffic is more than double the pre-war level, and already in 1930 the commodity turnover was three times as high as the pre-war turnover.

In the second half of 1929-30 there was a considerable emission of new currency. This was to a certain extent connected with the transition period of the credit reform. The situation aroused comment in bourgeois newspapers hostile to the Soviet Union, to the effect that Soviet currency was unstable. This charge was obviously of an anticipatory nature, as was proven by the "special quarter", October-December, 1930. In this period, in contrast to all previous years, the enormous seasonal grain-purchasing operations of more than two billion rubles were carried out without resorting to currency inflation. The faith of the population in Soviet currency is eloquently attested by the fact that in 1929-30 personal accounts in the savings banks amounted to 130 million rubles and in the first six months of 1931 to 121 million rubles.

The credit system like the budget is only one element, though an important one, in the Soviet financial system. The full synthetic expression of planning in Soviet finance is to be found in the unified financial plan. This includes and coordinates the separate financial plans, such as the budget, the credit plan, the finances of industry, transportation, the socialized sector of agriculture, etc. Fundamentally, the unified financial plan is the plan for the organization of accumulation and for financing all economic and cultural construction.

The unified financial plan fully reflects all the financial resources of all the branches of socialized economy and the financial institutions, as well as the channels into which these funds are

directed. The work of all the financial institutions of the country is coordinated. This renders it possible to draw up mutually coordinated sectional plans, which makes financial planning complete and effective.

Unlike the federal budget, the unified financial plan takes into consideration those resources which remain at the disposal of individual institutions and economic organizations, and plans the lines along which they are to be directed. As national economy becomes more fully socialized, the unified financial plan extends its sphere of operations and takes in every financial relation in the country. The main resources at the disposal of the unified financial plan consist of the accumulation provided by socialized economy. In 1931 this accumulation, after making the necessary deductions for depreciation, constituted over 38 per cent of the total budget (32 billion rubles) of the unified financial plan.

THE FIVE-YEAR PLAN AND ITS FULFILLMENT.

The Five-Year Plan, covering the period from 1928-29 to 1932-33, is the program for the social and technical reconstruction of Soviet national economy.

The Five-Year Plan provided total capital investments in the whole of national economy of 64.6 billion rubles, as compared with 26.5 billion rubles invested in the previous five years. This total included 16.4 billion rubles for industry; 23.2 billion rubles for agriculture; 10 billion rubles for transportation; and 3.1 billion rubles for electrification. The Plan estimated that, as a result of these investments, the total basic capital of the Soviet Union would rise from 70 billion rubles in 1927-28 to 128 billion rubles in 1932-33, i. e., an increase of 32 per cent. This means an increase in the basic capital of industry as a whole from 9.8 billion rubles to 29.1 billion rubles; for electric power stations an increase from 1 billion to 5 billion rubles; for railroad transportation an increase from 10 billion to 17 billion rubles; and for agriculture an increase from 28.7 billion to 38.9 billion rubles. Under the Five-Year Plan industrial production was scheduled to increase from 18.3 billion rubles in 1927-28 to 43.2 billion rubles in 1932-33; agricultural production to increase

over the same period from 16.7 billion rubles to 25.8 billion rubles; and railway freight traffic to increase from 88 billion to 163 billion ton-kilometers. The net production of the whole of national economy, i. e., the national income, was scheduled to increase from 24.4 billion rubles in 1927-28 to 49.7 billion rubles in 1932-33.

The Plan provided for the allocation of 78 per cent of the capital invested in industry to those branches of industry which produce producers' goods. This was estimated to result in an increase in output of these branches of industry of 230 per cent, as compared with an increase of 180 per cent in the output of state large-scale industry as a whole. With regard to electric power, the Plan provided for the construction of 42 regional electric power plants, including the Dnieper River hydro-electric power plant, the Svir River hydro-electric power plant, the Bobrikov power plant using Moscow coal, the Zuevsky power plant in the Donetz Basin, etc. The output of electric energy in 1932-33 was expected to total 22 billion kilowatt-hours as compared with 5 billion kilowatt-hours in 1927-28. In connection with iron and steel production new powerful metallurgical works were scheduled to be built, increasing the production of pig iron from 3.3 million tons in 1927-28 to 10 million tons in 1932-33. In the machine-building industry the Plan provided for the reconstruction of old plants and the building of a number of new plants. These include various automobile plants, the tractor plants at Stalingrad and in the Urals, the Sverdlov works for the construction of heavy machinery, the Rostov agricultural machinery plant, etc. Under the Five-Year Plan the share of the socialist sector in the gross output of the country was scheduled to increase as follows:

	1927/28	1932/33
Industry	from 80 %	to 92 %
Agriculture	„ 2 %	„ 15 %
Retail trade	„ 75 %	„ 91 %

The first two years of the Five-Year Plan have not only completely demonstrated its practicability, have not only proved that the Plan is a factor in directing the development of the

whole of national economy, but have shown that the high rates of development indicated in the Five-Year Plan are being surpassed. The extent of the fulfillment of the Plan during the first two years (1928-29 and 1929-30) is shown in the following table:

	Unit	Five-Year Plan schedules	Actual results	Per cent fulfillment
I. Capital investments (at prices of respective years)				
1. in the socialized sector	mill. rub.	12,653	13,762	108.8
2. in state large-scale industry	„ „	3,990	4,605	115.4
3. in agriculture	„ „	1,719	2,397	139.4
4, in transportation	„ „	2,504	2,688	107.3
II. Gross production of state large-scale industry (including the food-industry), at 1926-27 prices	„ „	29,337	30,456	103.8
1. Group A	„ „	12,476	13,764	110.3
2. Group B	„ „	16,861	16,692	99.0
III. Sown area (total)	hectares*	239.0	245.8	102.8
1. Grain	„	196.3	198.0	100.9
2. Cotton	„	2.4	2.6	108.4
3. Sugar-beet	„	1.7	1.8	105.9
IV. Marketable grain output	mill. met. tons**	17.34	18.53	107.0
V. Railway freight traffic	„	350.9	409.2	116.6

* 1 hectare = 2.471 acres. ** 1 metric ton = 2,204.6 lbs.

A striking feature of these figures is the extent to which the schedules of the Five-Year Plan have been surpassed in heavy industry and in agriculture, especially as regards the area sown with industrial crops and as regards marketable grain.

The increase in all branches of national economy beyond the limits set by the Five-Year Plan found expression in a corresponding growth of the national income. In the ten years from 1921 to 1931 the national income of the Soviet Union increased almost 200 per cent. In 1921 it was 40 per cent of the 1913 income; at the end of the restoration period, 1926-27, the national income was already 102 per cent of the 1913 income;

while in 1930 the national income had risen to 156.3 per cent of the 1913 income.

The following figures indicate the rate of development during the reconstruction period: in 1929 the national income increased 8.4 per cent, in 1930 it increased 20.8 per cent, and in 1931, according to the program, it is scheduled to increase 39 per cent. The national income of pre-revolutionary Russia increased from 1900 to 1913 only by 40 per cent, i. e., at the rate of about 3 per cent a year. The national income of the United States has increased at the rate of from 4 to 5 per cent a year, and only during one five-year period did the rate of increase rise to 9 per cent a year.

In spite of the rapid rise in the population of the Soviet Union (an average annual increase of 3,500,000), the per capita income is showing a steady growth. In 1913 the per capita income was 100.4 rubles a year. At 1913 prices, the annual per capita income in 1927-28 was 101.1 rubles; in 1928-29 it had risen to 111.9 rubles; in 1929-30 to 126.5 rubles; and in 1930 to 137.5 rubles. The per capita income in 1930 was thus over 37 per cent higher than the 1913 level.

It should be kept in mind that the class structure of this income at present is entirely different from that prevailing in 1913, since the landowners, the big bourgeoisie, etc., have disappeared. If this is taken into consideration, it becomes obvious that, as far as the proletariat and the masses are concerned, the difference in the present per capita income as compared with the pre-revolutionary period is even greater than the difference indicated in the figures cited above. The social structure of the Soviet national income is strikingly indicated by the fact that already in 1926-27 the income of the urban and rural bourgeoisie represented only 3.5 per cent of the total national income. For purposes of comparison it should be observed that in the advanced capitalist countries unearned incomes constitute, even at a modest estimate, from 40 to 50 per cent of the national income, although the numerical proportion of the capitalist class to the total wage-earning population ranges from 2.6 per cent in Great Britain to 8.5 per cent in Germany.

The schedules of the Five-Year Plan with regard to the national

income have been surpassed. According to the Plan, the national income in 1928-29 was to have been 120.8 per cent of the 1913 income; actually it was 123.8 per cent. The estimate for 1929-30 was 139.8 per cent of the 1913 income; actually it was 143 per cent.

A noteworthy feature is the rapidly increasing portion of the Soviet national income which falls to the share of the socialized sector of national economy, i. e., to state and cooperative enterprises. In this respect actual achievements are far in excess of the schedules of the Five-Year Plan. The share of the various sectors in the national income (on the basis of 1926-27 prices) has been as follows:

	1928	1929	1930	1931
	(in per cent)			
State enterprises	43.9	48.2	52.4	56.2
Cooperative „	9.8	14.1	21.3	25.5
Total for socialized sector	53.7	62.3	73.7	81.7
Private sector	46.3	37.7	26.3	18.3
Total	100.—	100.—	100.—	100.—

Socialist forms of economy are developing at a rate considerably in excess of the estimates of the Five-Year Plan. By 1930 the socialized sector had already achieved a secure and absolute predominance in the national economy. The Soviet Union had entered the period of socialism. In 1931 the socialized sector became the dominating factor in agriculture, where the capitalist elements had been most strongly entrenched. By the end of 1931 the foundation of socialist economy will have been firmly laid. The following figures show the victorious march of socialization:

	1928	1929	1930	1931
	(in per cent)			
Basic capital	52.5	56.2	62.7	71.3
Gross output of industry (including "non-census")	84.4	89.5	94.3	97.6
Marketable output of agriculture	4.4	8.2	29.7	55.0
Retail trade turnover	78.0	88.6	94.4	97.7

These radical changes in the relation of class forces made it possible for the Sixth Congress of Soviets, which met in March, 1931, to declare that "in our country there is no longer any question as to the victory of socialism.... The victory of socialism in the U. S. S. R. is completely assured."

SUMMARY.

This is a summary of the first ten years of planned socialist economy in the U. S. S. R. The Soviet Union is rapidly carrying out its slogan of "overtaking and surpassing the leading capitalist countries in the shortest historical period". This slogan was given concrete form by the Sixth Congress of Soviets when it resolved to carry out in the present decade the slogan of overtaking and surpassing the leading capitalist countries in economic and technical matters. There is no question that at the present time the Soviet Union has surpassed the capitalist countries in the rate of economic development. Even before the crisis of 1929-1931, it was clear during the years following the world war that as regards production the capitalist countries were either "marking time" or else increasing production at a rate which was relatively very slow and becoming steadily slower. Even during the best years of its development capitalist economy never attained the speed which characterizes development in the Soviet Union at the present time. A comparison of the rates of increase (+) or decrease (—) in the general index of the physical volume of production for the leading countries during the past three years makes a very interesting study:

	1928	1929	1930
U. S. S. R.	+26.7	+24.8	+35.8
United States	+ 4.7	+ 6.3	—18.3
Great Britain	— 5.2	+ 7.9	—10.8
Germany	— 0.1	+ 1.8	—17.2
France	+16.6	+ 9.8	+ 0.6

The Soviet Union has surpassed the leading capitalist countries in respect of the index of the present level of industrial production as compared with the pre-war level. In Germany and Great Britain industrial production in 1930

was below the pre-war level, while in the Soviet Union it was more than double the 1913 figure. The Soviet index for 1930 far exceeded the French index and even surpassed the American index:

1913 = 100	
U.S.S.R.	238.3
United States	188.5
Great Britain	82.2
Germany	91.1
France	140.4

In 1931 the volume of industrial production in the Soviet Union will be three times as great as the pre-war volume.

The progress of Soviet economy has been so tremendous that the output of a number of the main branches of Soviet industry now exceeds the output in the leading European countries. This, for example, is the case with iron and coal. The Soviet output of pig iron scheduled for 1931 is larger than Great Britain's output in 1930 and is equal to 82.5 per cent of the German output in 1930. It should be taken into consideration that in capitalist countries in 1931 there has been a still further drop in pig-iron production.

In 1931 the Soviet Union surpasses France - which after the war developed an "American" tempo - in the consumption of iron and steel, in the production of coal, in the output of electric current, and in machine-building. The Soviet Union is already ahead of Great Britain as regards output of electric current.

At the present time the Soviet Union has the largest agricultural production of any country in the world. In 1931 the socialized sown area alone is more than 3 times as large as the sown area of Canada and is equal to more than one-half of the sown area of the United States. As regards mechanical motive power in agriculture, the Soviet Union occupies first place among all European countries.

The experience of the first two years indicates that the Five-Year Plan will be completed in four years; in some important branches of industry it has actually been completed in a still shorter period. Following the completion of the Five-Year Plan,

the Soviet Union will compete with Germany for second place in the list of the world's leading industrial countries.

During the next three or four years the Soviet Union will occupy first place in Europe in respect to the volume of industrial production, especially in respect to the production and consumption of textiles, the electrification of industry, the amount of mechanical power per worker, and the productivity of labor in industry. The last factor is of decisive importance.

"In the long run the productivity of labor is of the utmost importance, is decisive for the victory of the new social order. Capitalism created a productivity of labor unknown to serfdom. Capitalism can and will be finally defeated by the fact that socialism will create a new and much higher productivity of labor." (Lenin.)

What is the secret of all these successes? What are the causes of this tremendous speed, hitherto unknown in the history of mankind, in the economic, social, and cultural progress of the Soviet Union, in a country whose level of development lagged behind the level of the leading capitalist countries for many decades? All this is a result of planned socialist economy, the result of the new social order.

"None of the old classes, neither the feudal aristocracy nor the bourgeoisie, could carry out the task of liquidating the backwardness of our country. These classes were not only incapable of carrying out this task, but they could not even formulate the problem in anything like a satisfactory manner." (Stalin.)

The conversion of the working class into the absolute owner of all the means of production, and consequently the owner of the socialized output, has set free the tremendous creative forces and the productive energy of millions of workers. This, in turn, has converted labor from hired slavery, which it actually is for the overwhelming majority of the population in modern capitalist society, from toil for the sake of a mere subsistence, (while other millions of people are chronically unemployed and are doomed to poverty and starvation) into a thing of honor and glory, which is the new socialist attitude towards labor. This explains the labor enthusiasm of the masses, which has

been noted by all unbiased observers of Soviet life, an enthusiasm which expresses itself in socialist competitions, shock brigades, and the flood of inventions and proposals for rationalization submitted by the workers themselves.

The equality of men and women, which has been actually realized in all spheres, has led to a great increase in the number of active collaborators in the task of building up economic and cultural life. The complete elimination of national inequality has been an active factor in the development of tens of millions of people who were previously colonial pariahs, denied all economic and cultural improvement by the ruling class of the dominating nation. At the same time, the development of these peoples has resulted in the development of the natural wealth of vast regions.

The capitalist principle of economic activity, which subordinated the development of social production to the interests of private profit, has been abolished; it has been replaced by the socialist principle, based upon the maximum development of the productive forces of society in the interests of a systematic improvement in the well-being of the masses. This has liberated the social productive forces from the fetters of private property. It is now possible to distribute the productive forces effectively and rationally, taking into consideration the various economic regions, the grouping and combining of allied industries, the maximum size of the various enterprises, etc. In this respect the abolition of private property in land was of decisive importance, as it was likewise for the rational organization of agricultural production. The creation of large-scale agriculture, based on the collective principle and capable of applying the most rational methods of cultivation, has also made it possible to develop this branch of the national economy and to improve the material and cultural level of the agricultural population. Such improvement was beyond the powers of capitalist agriculture, bound down by rent and the relations of bondage and usury.

The planned socialist organization of economic life has released national economy from that tremendous waste in the sphere of production, circulation, and distribution, which is inherent in the capitalist system, liberating it from parasitism, speculation, and

fraud. Planned socialist economy has abolished the anarchy of capitalist production and the under-consumption which is indissolubly connected with it. Thus, planned socialist economy has done away with crises of over-production and remains unaffected by this great destructive force in modern society. Soviet economy has none of those market crises which are inevitable under capitalism. Planned socialist economy develops the productive forces for the purpose of increasing the prosperity of the masses, but at the same time it creates an unlimited demand which, in turn, stimulates production still further and opens a wide horizon for the growth of productive forces. Planned economy, which consciously directs social production, creates a new and mighty productive force.

The planned socialist economy of the Soviet Union has only passed through the first and the most complex stage of its development. It has met and continues to meet resistance, difficulties, and hindrances. Many difficulties have not yet been completely removed, both in the sphere of the immediate and complete satisfaction of the demands of the masses, whose cultural standard is rising with fabulous speed and whose requirements grow from year to year, and in the sphere of the acquirement of modern technical methods and rational organization. There continues, for instance, to be a shortage of skilled and fully reliable specialists.

But all these difficulties - which have arisen chiefly from the economic and cultural heritage which the Soviet Government took over from Tsarist Russia, complicated by the resistance of capitalist elements within the country and the aggressive hostility of the capitalist world - are being successfully vanquished by the victorious march of socialist construction. The cultural and technical backwardness of the country is being overcome at an unprecedented speed. The ground is being cut from under the feet of the hostile classes which have outlived their time. All these difficulties are difficulties of growth. The completion of the Five-Year Plan will create a basis for the national economy of the Soviet Union which will make it possible to advance at a still higher speed and to write a new and even more brilliant socialist page in the history of human society.

THE PLANNING AND DEVELOPMENT OF AGRICULTURE IN THE SOVIET UNION

BY A. GAYSTER, VICE-PRESIDENT OF THE AGRICULTURAL ACADEMY OF THE U. S. S. R. AND MEMBER OF THE STATE PLANNING COMMISSION (GOSPLAN)

In contrast to the course of agricultural evolution in other countries, agriculture in the Soviet Union has in recent years entered a period of unusually rapid growth. Tens of millions of acres of new land have been put to use. There has been a great increase in the amount of chemical fertilizer and of farm implements and machinery, especially tractors, employed in agriculture. There has also been a considerable increase in the marketable output and income.

Agriculture in the Soviet Union, since the first years of the November Revolution, has been under the guidance of the central planning organs of the Soviet Government. The development of agriculture has been characterized by a continual strengthening of socialist forms of production at the expense of petty peasant economy.

The development of collectivization to a point where there is complete collectivization in a number of regions, together with the rapid increase in the number of state farms, has put the method of agricultural planning on a solid basis. The direct guidance of agricultural undertakings and their rational distribution throughout the country have created ideal conditions for the application of science to agriculture. By these means this branch of national economy, which had been the most backward, has been raised to the level of the requirements of modern science. The remarkable prediction made by Engels that "agriculture, which is now unable to adopt fully tested improvements and scientific methods owing to the limitations set up by private property and the small area of private farms, will also enter a period of prosperity and will provide society with sufficient products", has been verified.

The Soviet Union was a country of extremely small peasant farms. In 1927 there were 24,800,000 farms in the Soviet Union, having an average area under cultivation of 11 acres. In 1931 226,000 collective farms sowed 219,583,000 acres. The average area of these big socialized farms was 953 acres. This means

that the area of socialized agriculture in the Soviet Union is three or four times as large as the sown area of such countries as Canada, France, and Germany, and is equal to more than half the total cultivated area of the United States. We can only appreciate the significance of the process of voluntary consolidation of small peasant farms into big collective farms and the growth of state farms in the Soviet Union, if we take into consideration the fact that in the United States during the 25 years from 1900 to 1925 the ratio of the number of farms with an area of over 500 acres to the total number of farms increased from 2.6 per cent to 3.2 per cent, while the ratio of the area of these farms to the total sown area increased from 31.7 per cent to 34.8 per cent. In Germany, during the period from 1907 to 1925, the ratio of the number of farms of over 500 acres to the total number of farms declined from 16.5 per cent to 15.6 per cent.

Planned socialist development of agriculture has given rise to a new type of socialized agricultural production and to the development of large socialized farms on a scale and with a speed hitherto unknown. This development has not been based upon the ruin and expropriation of the small peasants but upon the improvement of their standard of living and their economic activity. It has involved a considerable growth in the productive forces of agriculture and its radical social and technical reconstruction.

The cultivated area of the Soviet Union in the four years from 1927 to 1931 increased by 56,810,000 acres. During the same period the cultivated area of the United States decreased by six million acres. The sown area of the entire world outside the Soviet Union decreased from 900,500,000 acres in 1927-28 to 886,500,000 acres in 1930-31. What development of world agriculture there has been in the last four years has been based entirely upon the development of agriculture in the Soviet Union.

In order to appreciate the significance of this growth of the cultivated area in the Soviet Union, it should be recalled that during the 25 years from 1900 to 1925 the sown area of the United States increased by 55,000,000 acres. In other words, the sown area of the United States increased in 25 years by

an amount less than the increase in sown area in the Soviet Union in five years.

The rate of development of the production of industrial crops in the Soviet Union is even more striking. The area sown with cotton in 1913 was 1,752,500 acres; by 1921 it had fallen to 300,000 acres. By 1927 the pre-war level was surpassed, the sown area totalling 1,854,970 acres. In 1931 this area was trebled and reached 5,821,790 acres. The area under sugar beets in 1913 was 1,620,080 acres. In 1921, as a result of war and intervention, it fell to less than half of its pre-war figure - 538,460 acres. By 1927 the area under sugar beets reached the pre-war level - 1,642,550 acres. In 1931 the area sown with sugar beets was more than double this amount, totalling 3,383,900 acres. The principal oil-bearing plant, the sunflower, in 1913 had a sown area of 2,247,700 acres. By 1931 the sown area was 11,347,180 acres.

Mention should also be made of the rapid growth of the area sown in the Soviet Union with new crops, such as soy beans, kendyr, and kenaf. There has also been an enormous increase in the area sown with corn, rice, etc. Only in a country that has a planned socialist economy is it possible to raise the sown area of soy beans from 178,750 acres to 1,125,000 acres in a single year, and to plant 265,000 acres with kenaf and kendyr.

Industrialization assures the technical reequipment of agriculture in the Soviet Union and a great increase in the amount of modern machinery employed in agriculture. On October 1, 1924, there were 2,560 tractors (35,600 hp.) in use on the farms of the Soviet Union. In the spring of 1931 the Soviet Union already possessed 110,000 tractors, and is now second only to the United States as regards the number of tractors employed in agriculture. By January 1, 1933, the tractor park in the Soviet Union is expected to total 3,057,000 hp.

The value of all agricultural machinery (including wagons, hand tools, etc.) amounted at the end of 1927, to 2,679 million rubles, and, at the end of 1930, to 3,397 million rubles. Hence, the value of agricultural machinery increased by 718 million rubles, or 27 per cent, in three years. In 1931 investments in implements and buildings amounted to 1,330 million rubles; de-

preciation for the year to 606 million rubles. The increase in value for this year alone is thus equal to the total increase for the preceding three years.

The value of the machinery and tractors used in agriculture increased by 46 per cent in the three years from 1927 to 1930, and at the end of 1930 totalled 1,610 million rubles. The value of the additional tractors, machinery, and implements scheduled to be put into operation in agriculture this year is 855 million rubles, that is, more than half the value of all the tractors, machinery, and implements used in agriculture at the beginning of the year. The total value of the tractors, machinery, electrical equipment, repair shops, and agricultural industrial plants to be provided for agriculture in 1931 is in excess of 1,300 million rubles. This is roughly equal to the value of the engines, motors, lathes, etc. which were received by industry in 1930.

The amount of fertilizer which was used increased from 666,000 metric tons in 1930 to 2,427,000 tons in 1931. In 1931 agriculture will receive 220,000 tons of alkali fertilizer from the Solikamsk alkali industry.

The industrial assistance given to agriculture has made a great change in the type of traction power. In 1927, 98.9 per cent of agricultural work was performed by animals. In 1931 the proportion performed by animals has been reduced to 74.4 per cent, while the work done by tractors has risen to 21.9 per cent and that by automobiles to 3.7 per cent.

The actual development of agriculture during the three years of the Five-Year Plan shows that almost all the main figures of the Plan have been fulfilled in three years or less. According to the figures of the Five-Year Plan, the sown area in 1932-33 in the collective farms was to total 51,500,000 acres, and 20 per cent of the peasant farms were to have been organized into collective farms. But already in the spring of 1931 the sown area of the collectives had reached 196,250,000 acres, and 57.1 per cent of all the peasant farms in the country had been organized into collective farms. The Five-Year Plan provided for 11,000,000 acres of sown area on the state farms in 1932-33; by the spring of 1931 a total of 26,250,000 acres had already been sown. The successes of industrialization and the surpassing

of the figures of the Five-Year Plan in industry made available a larger supply of tractors, agricultural machinery, and implements than had been scheduled in the Plan. The Five-Year Plan provided for a total tractor park in the spring of 1932-33 of 1,307,000 hp.; in 1931 a total of 1,619,000 hp. was already in use. The Five-Year Plan provided for 1,000 machine-tractor stations by the end of 1933; in 1931 the number had already reached 1,400 with a total horsepower of 700,000.

Owing to the fact that the Plan - as regards collectivization, organization of state farms, and the supply of tractors and machinery - has been considerably surpassed, the Plan has likewise been exceeded as regards the development of certain branches of agriculture. In the current year the area under cotton is 45 per cent greater than that scheduled for the last year of the Five-Year Plan, the area under flax is 28 per cent greater, and the area under sugar beets is 25 per cent greater.

Mention should be made of the Five-Year Plan for the development of cattle-raising. The struggle of the kulaks against the rapid growth of the collectivization movement led last year to a considerable reduction in the number of cattle. Moreover, socialized cattle-raising was only recently begun on a large scale. This decrease in the number of live-stock will be compensated for during the next few years by an increase in the yield of milk and the amount of meat per animal on the state and collective farms.

These are the first results of a planned socialist development of agricultural production. These are the results of overcoming the tendency toward spontaneous economic development which was attempting to drag the national economy of the Soviet Union along the capitalist path of development. These are the results of the widespread development of state farms and of the mass collectivization which was linked up with the elimination of the remnants of the capitalist classes in the Soviet Union. In order that we may the more properly appraise the results of planned direction of agriculture in the Soviet Union, we shall deal with the trends of agricultural development both before and after the November Revolution.

THE PLANNING AND DEVELOPMENT OF AGRICULTURE

Agriculture in pre-revolutionary Russia was characterized by the concentration of a great portion of the land in the hands of wealthy landowners, by the prevalence of extremely small farms among the peasants, and, as a result of the foregoing, by a serf-like dependence of the mass of peasantry upon the landowners. It we divide the farms of pre-revolutionary Russia into four groups according to their size, we find that the relation between these groups, according to data contained in the 1905 census, was as follows:

	Number of farms (in millions)	Area of land (in million dessiatins)*	Average area per farm (dessiatins)
1. Poor peasants, crushed by serf-like exploitation	10.5	75.0	7.0
2. Middle peasants	1.0	15.0	15.0
3. Bourgeois peasant and capitalist farms	1.5	70.0	46.7
4. Semi-feudal estates	0.03	70.0	2,333.0

* 1 dessiatin = 2.72 acres.

The overwhelming majority of the peasant farms of that period were tilled by poor peasants, who were crushed by the exploitation of the landlords and did not even possess means sufficient to maintain properly their physical existence. The natural consequence was the chronic condition of ruin and undernourishment of the poor peasants in Russia, as evidenced by physical degeneration and the increasing number of rejections from the army on grounds of physical unfitness. Thus, according to official data for 50 provinces of European Russia, the percentage of rejections and exemptions from military service increased from year to year as follows:

1874—78	11.2 per cent
1879—83	14.9 „ „
1884—88	16.9 „ „
1889—93	17.9 „ „
1894—98	17.6 „ „
1899—1902	22.1 „ „

Thus, the transition of agriculture in pre-revolutionary Russia

from a primitive type of economy, producing only for village consumption, to farming for the market was a process accompanied by the pauperization of the great mass of the rural population, by their ruin and expulsion from agricultural production.

The inherent conflict of interests arising from the ruin of the mass of peasantry, the capitalist development of agricultural production, and the domination exercised by the big landowners over the land, the basic means of agricultural production, constituted the main cause of the revolution of 1905 and likewise one of the most important reasons for the revolutionary outbreak of 1917. Although the 1905 revolution was crushed by the punitive expeditions of the Tsarist troops and by mass executions, the Tsarist Government was compelled by the so-called "Stolypin laws", to stimulate the development of agriculture along commercial and capitalist lines, at an increased pace. But, inasmuch as the political power and the resources and profits still remained in the hands of the ruling landowning class, these attempts could not provide sufficiently favorable conditions to overcome the conflict of interests between landowners and peasants. This conflict was merely made more acute by the Stolypin reform, despite the fact that the Tsarist Government tried to win the support of the upper strata of the village by enabling them to acquire additional land through the plundering of the communal lands. The outbreak of the 1917 Revolution, hastened by the war, led to the overthrow of the Tsarist power and to the overthrow of the capitalist class, which had attempted to seize power after the March Revolution.

The victory of the November Revolution brought about the downfall of the large landowners and the nationalization of the land. It decreased the holdings of the upper strata of the village, and gave considerable amounts of land both to the poor and middle peasants. By way of illustration, let us take the results of the agrarian revolution in the Ukraine.

The redistribution of land is indicated in the following table:

	Prior to the Revolution	Confiscated	After the Revolution	Increase or Decrease	Per cent Change
	(in million dessiatins)				
Poor and middle peasant farms	20.0	—	34.5	+14.5	+ 72.5
Kulak (rich peasant) farms and farms owned by non-peasant bourgeois	8.6	6.8	1.8	— 6.8	— 79.0
Estates and church land	12.1	12.1	—	—12.1	—100.0
City land	0.6	0.3	0.3	— 0.3	— 50.0
State and communal land	—	—	4.7	+ 4.7	—
Total	41.3	19.2	41.3	—	—

Before the revolution the poor and middle peasants in the Ukraine owned less than half of the land, while the kulaks and non-peasant bourgeois owned 20 per cent and the big landowners 30 per cent of all the land. The revolution brought about a sharp change in these relations. It completely eliminated the large landed estates, left the kulaks only about 5 per cent of the land, and handed over 83 per cent of the total land area to the poor and middle peasants. The victory of the November Revolution meant the real liberation of the poor and middle peasants from the exploitation of the big landowners. It increased considerably their land holdings, and at the same time sharply reduced the burden of taxation by means of which the landowners' government had additionally exploited these sections of the rural population. The middle peasant became the central figure in post-revolutionary agriculture.

It was quite obvious even in the first few years after the revolution that, if small-scale production in agriculture was continued for a long time, it would be impossible to reconstruct this most backward branch of national economy or to bring about any marked improvement in the living conditions of the poorer peantry. Lenin considered it necessary to "give all possible support to the transition from small-scale peasant economy to large-scale socialized pro-

duction", so that "agriculture, the most backward branch of production, may advance along new lines, may be reconstructed and converted from an occupation carried on by the primitive methods of the past into an industry based upon science and technique". Such a transition, however, called for the development of industry to a point where it could supply agriculture with tractors, modern machinery, and electrical equipment.

The guiding principle of Marxist-Leninist planning was to direct agriculture along a path which would lead to and guarantee the development of socialized production (state farms and collective farms), restrict and displace kulak production, and, at the same time, raise the standard of living of the poor and middle peasants, in this way helping them to appreciate the advantages of socialized agriculture. The plans provided for a series of measures to be carried out each year for the purpose of organizing and facilitating the transition from small-scale agriculture, which prevailed at that time in the U. S. S. R., to socialized agriculture. In contrast to this Leninist plan for the socialist reconstruction of agriculture, certain economists, such as Kondratiev and Oganovsky, put forward a different plan for the development of agriculture. Their plan was based on their disbelief in the possibility of the victory of socialism in agriculture, and provided for measures encouraging the capitalist development of agriculture. Instead of organized planning of agricultural development, their plan was based upon the spontaneous development of small-scale agriculture. They proposed to submit to the laws of this development rather than to guide the development of small-scale farming to socialized farming.

These two plans inevitably had to come into sharp conflict both theoretically and practically. * The victory of the Leninist plan of socialist development of agriculture enables us to obtain a sufficiently clear view of the policy of the Soviet Government during the so-called "restoration period" of 1921-1926, when the

* It is now known that the authors of this bourgeois plan for the restoration of agriculture went over to active struggle against the plan of socialist reconstruction at the very time when the peasant masses had become convinced of the advantages of collective farming and were joining the collective farms in millions. These authors joined the ranks of a counter-revolutionary organization of wreckers.

development of market relations in the village caused some economists to speak of the reestablishment of capitalism in the village.

The restoration period was characterized by the predominance of small peasant farms in the agriculture of the Soviet Union. The Soviet system of government created the necessary prerequisites for raising the economic level of the poor peasantry rather than for their wholesale ruination. It led to a fairly rapid restoration of agriculture (including stock-raising), which had been almost destroyed by the war, blockade, and famine.

It should be noted that the authors of the bourgeois plan for the restoration of agriculture in the Soviet Union did not realize the extent to which the small farms had been affected by the revolution, even in the period when they were developing as individual farms. The plan of Kondrativ estimated that the cultivated area in 1928 would be 265 million acres, but in 1926 it had already reached this figure, and by 1928 it had reached 274 million acres. According to Kondratiev, the number of cattle in 1928 was expected to total 74 million. In reality this level was exceeded in 1926, when the number of cattle totalled 75 million, while in 1928 there were more than 79 million head of cattle in the Soviet Union.

The rapid restoration of agriculture in the U. S. S. R. was accompanied by an improvement in the living conditions of the agricultural population. According to data of the Central Statistical Bureau, the consumption of meat by the rural population in 1925 exceeded the pre-war consumption by one-third. During the following years there was a constant increase in the consumption of meat and fats by the rural population as can be seen from the following table which shows the annual per capita consumption:

Years	Kilograms	Per cent of 1924—25
1924—25	16.05	100.0
1925—26	16.54	103.1
1926—27	18.29	114.0
1927—28	18.71	116.6
1928—29	22.41	139.6

The great improvement in the living conditions of the rural population led to a sharp decline in the death rate after the revolution, especially in the infant mortality rate. The death rate in rural districts amounted to 28.6 per 1,000 persons in 1911-1913; to 21.7 in 1926; to 21.8 in 1927, and to 18.7 in 1928. In 1911-1913, in European Russia, the infant mortality rate (for infants up to one year of age) was 266 per 1,000. In 1926 the infant mortality rate among the rural population was 174, and in 1928 it was 156.

The development of production for market by small producers inevitably leads to class differentiations among them and to the growth of a capitalistic group. A peculiar feature of the Soviet economic system is evidenced by the fact that during the period when small production in agriculture predominated the growth of the kulaks as a class was accompanied by the much more intensive economic growth of the poor peasants. They passed into the ranks of the independent producers, thus strengthening the class of middle peasantry. This feature of the class differentiation in the Soviet village is the reverse of what takes place under capitalist conditions. Under the latter, the growth of market production leads to the enrichment of the higher groups and the ruin of the lower groups.

This period of small-scale agriculture, however, clearly exposed the limited productive possibilities of the small farms. The more complicated agricultural machinery was possessed only by a small group of farms. In 1927 the number of farms in the Soviet Union possessing their own seed-sorting machines represented 11.6 per cent of the total; the number having seed drills, 3.7 per cent; those with harvesters, 6.2 per cent; and those with threshing machines, 4.3 per cent. The great bulk of the peasants were compelled either to limit themselves to the most primitive implements or to hire agricultural machinery.

The extensive development of the cooperative movement (in 1929 about 80 per cent of the rural population belonged to the consumers' cooperatives and 45 per cent of the total number of households belonged to the agricultural cooperatives) caused the peasant masses to realize the considerable increase in the pro-

ductivity of labor which resulted from collective production and the use of modern machine methods. The financial assistance in the form of credit granted by the Soviet Government to all cooperative societies, especially to collective farms, made the transition much easier. All these factors, combined with the growing solidarity and organization of the poor and middle peasants, who carried on a determined struggle against the attempts of the kulaks to organize a "grain strike", led to a more rapid and intensive development of collective farms.

On June 1st, 1927, collective farms embraced 195,000 households, or only 0.8 per cent of the total number of peasant households; on June 1, 1928, 417,000 households, or 1.7 per cent of the total; on June 1, 1929, over 1,000,000 households, or 3.9 per cent; on July 1, 1930, over 6,000,000 households, or 24.6 per cent; on July 20, 1931, 13.700,000 households, or 57.1 per cent. On June 1, 1927, the sown area of the collective farms totalled 1,872,500 acres; on June 1, 1928, 3,417,500 acres; on June 1, 1929, 10,320,000 acres; on June 1, 1930, 96,750,000 acres; on June 1, 1931, 196,250,000 acres.

The fundamental cause of this tremendous growth in the collectivization of poor and middle farms in the Soviet Union was the obvious superiority of large-scale collective farming disclosed during the first few years of the organization of large collective farms. Collectivization involved the elimination of boundary strips and the formation of large land areas, which enabled the peasants to make better use of their means of production and to apply machine methods more advantageously. The nationalization of land provided the indispensable basis for the transformation of the millions of small strips of land, constituting the peasant holdings which entered into the collective farms, into large tracts of land organized as collective farms in conformity with the local topography, with the nature of the soil, and with the technical methods used.

The uniting of the small peasant holdings into big collective farms resulted in a great increase in the productivity of labor. The sown area per able-bodied member of a collective farm was one hectare more than the area cultivated per able-bodied man

on the small peasant holdings prior to their entrance into the collective farms. In the Ukraine the increase in sown area was 31.6 per cent; in the Middle Volga Region 73.1 per cent; in the Central Black Soil Region 23.0 per cent; in the Lower Volga Region 78 per cent; and in the Northern Caucasus 50 per cent. Draft cattle, which on the small peasant holdings had never been fully employed, were utilized to a fuller extent on the collective farms. In the Ukraine the effective employment of draft cattle increased by 24.1 per cent; in the Middle Volga Region by 30 per cent; in the Lower Volga Region by 25.2 per cent; and in the Northern Caucasus by 34.6 per cent.

The significant increase in the productive possibilities of the farms united in collectives is evidenced not only in the rate of growth of the collective farms themselves, but also in the decided improvement in the well-being of their members. The extent to which such improvement has taken place may be judged by a comparison of the annual per capita consumption of the main food products by the various peasant groups:

Product	Region	Poor Peasants	Middle Peasants	Kulaks	Collective Artels	Members of Farms Communes
		in kilograms				
Meat and fats	Northern Caucasus	12.2	16.5	20.3	20.9	32.1
	Volga Region	5.4	13.4	24.4	15.6	27.9
	Southwest Siberia	11.6	25.0	36.1	38.9	42.4
Milk and butter (in terms of milk)	Northern Caucasus	69.1	142.9	225.9	235.0	178.6
	Volga Region	159.7	182.5	206.9	204.0	269.0
Grain Products	Northern Caucasus	199.4	227.8	245.1	238.3	222.0
	Volga Region	203.8	228.3	229.9	220.5	208.2

The greatest rôle in demonstrating the advantages of large-scale socialist production has been played by the state farms, the so-called "sovkhozi". The Soviet Government boldly carried over its experience in large-scale industrial production into agriculture. The Zernotrest (Grain Trust) has 175 farms occupying an area of 36,000,000 acres. During the present year it has sown well over 12,500,000 acres. The Skotovod (Cattle-breeding

Trust) has 200 farms covering an area of 77,500,000 acres, and has 2,800,000 head of cattle. The Svinovod (Hog-breeding Trust) has 520 farms and 1,000,000 hogs. The Ovtsevod (Sheep-breeding Trust) has 130 farms covering an area of 36,500,000 acres and 4,400,000 head of sheep. The Milk and Butter Trust has 50 farms with 110,000 cows. The Cotton Trust has 44 farms with a total sown area of 800,000 acres. Such are the sizes of the principal agricultural trusts in charge of state farms.

The state farms are being developed along the following lines: the greatest possible specialization, production on the largest possible scale, and the highest degree of mechanization. The grain farms are developing on the basis of complete mechanization, and, according to the Plan, all the other state farms must work toward this goal.

One of the most important developments in the collective farm movement was the creation of machine-tractor stations. The first trial of this type of organization was made on the Shevchenko state farm in the Ukraine. The experiment was so successful that the system was widely adopted and received the support of the Soviet Government. Machine-tractor stations, which are centers for all the mechanical traction and technical equipment necessary for the efficient cultivation of the collective farms (which have only their own horse traction power), constitute the basic form in which the working class gives industrial assistance to the collective farms.

The collective farms on territory served by a machine-tractor station enter into contracts with the latter regarding the conditions under which the machine-tractor station will help cultivate the fields of the collective farms. The agricultural aid rendered by the machine-tractor stations, the combination of tractor and horse power, and the utilization of the peasants' means of production to the utmost, have greatly increased the productivity of labor on the collective farms served by these stations. Last spring, machine-tractor stations having 700,000 hp. in tractors and 870,000 collectivized horses at first fulfilled the sowing plan of 45,000,000 acres and then surpassed it, raising the figure to 50,000,000 acres. The output of grain on the collec-

tive farms that were served by machine-tractor stations constituted 27 per cent of the total grain output of all collective farms.

Machine-tractor stations result in increased yields due to the improved cultivation of the soil and to the agricultural aid rendered the farms. This, together with the growth in sown area, greatly increases the income of the collective farms.

The socialization of stock-raising on collective farms has brought to the front a new form of farm devoted to stock-raising for the market, namely, collective farms specializing in the raising of cattle. This form of large-scale socialized cattle-breeding is based upon rational feeding and the proper care of cattle, and is expected to produce a considerable quantity of animal products for the market. At the present time collective dairy farms have a total of about 1,000,000 cows. According to the Plan, this number is to be increased to 1,500,000. The hog-raising collective farms had a total of 635,000 pigs on July 1, 1931. In addition to these branches of live-stock farms, here are also being organized collective farms specializing in the raising of poultry sheep, rabbits, etc.

One of the characteristic features of Soviet economic life during the present period is the absence of unemployment. This important fact and factor in the economics of the Soviet Union is closely bound up with the social changes which have taken place in the Soviet village. Under a capitalist scheme of economy the formation of a reserve army of labor is to a considerable extent based upon the ruination of the peasants whereby they are converted from small owners into workers who maintain themselves by selling their labor power. Until very recently, owing to the prevalence of small-scale production, there existed elements of capitalism side by side with socialist elements in the Soviet rural districts. This gave rise to a certain amount of surplus labor power, which sought an outlet in the towns.

This was due to the fact that the Soviet Union inherited from Tsarist Russia an enormous number of poor farms which did not even possess the minimum quantity of the necessary means of production. The revolution gave the peasants land, and

created favorable conditions for improving their standard of living. It relieved a considerable proportion of the village population (35 per cent) from the burden of taxation, and established special funds for providing credit and agricultural aid to these poor sections of the rural population. As a result of these measures, the share taken by poor peasants and their families in the total population fell from 50 per cent before the revolution to 26 per cent in 1924-25 and to 22 per cent in 1926-27. But the most radical means of overcoming the propertyless condition of this section was collectivization. The poor peasants were the most active in the organization of collective farms, and the bulk of the members of the collective farms in the first period were recruited from among the poor peasants.

The great improvement in the living conditions of the poor peasants which resulted from the organization of collective farms, together with the fact that the mass of the rural population, including the middle peasants, had entered the path of collectivization, isolated the remnants of the capitalist class in the village, the kulaks, and took away their economic strength. The collective farm movement encountered the desperate resistance of the kulaks, who tried to disrupt the movement from within and from without. The destruction of the economic base of kulak exploitation and the measures taken to combat the attempts of the kulaks to weaken the collective farm movement led to the destruction of the economic influence of the kulaks in the districts of mass collectivization.

All this brought about a radical change in the social relations within the village. Before the development of mass collectivization the central figure in the Soviet village was the middle peasant. Today the central figure is the collective farmer. In 1928 the number of poor and middle peasants totalled 105,000,000. In 1931 the poor and middle peasants still carrying on individual farming number about 50,000,000, while the population of the collective farms has grown from 1,800,000 in 1928 to 60,000,000 in 1931. During these three years the kulak population has declined from 5,400,000 to 1,600,000. This change in the relationship of classes, which reflects the social change which has taken place in the village, has been accompanied by a great in-

crease in the income of the members of collective farms and of the agricultural proletariat (the workers employed by state farms and machine-tractor stations).

	1928	1929	1930	1931	1928	1929	1930	1931
	Total Income (in billion rubles)				(Per cent of 1928)			
	15.5	15.0	19.6	22.1	100	96.8	126.5	142.6
	Income Per Capita:							
	(in rubles)				(per cent of 1928)			
Agric. Proletariat	122	140	175	234	100	114.8	143.4	191.8
Members of Collective farms	145	153	210	234	100	105.5	144.8	161.4
Indiv. peasants	131	124	161	161	100	94.7	122.9	122.9
Kulaks	259	270	181	181	100	104.2	69.9	69.9

In this table we note first of all the steady increase in the income of the agricultural population, especially in that of the agricultural proletariat. In place of the farm laborers, the most oppressed section of the rural population who were mercilessly exploited by the kulaks, there has arisen - on the basis of the tremendous growth of socialized and mechanized agriculture (including both plant and animal husbandry) - a new rural stratum, the agricultural proletariat of the socialized farms. The living standard of the workers in this new stratum contrasts sharply with that of the farm laborers. The length of their working day has been reduced to the level of that enjoyed by industrial workers. There has been an enormous increase in literacy and technical skill among them, their wages have risen considerably, and their living conditions have materially improved. These are the achievements of the agricultural proletariat under socialism.

The income of the members of collective farms is also increasing. New technical equipment and the steps taken toward the better organization of labor on the collective farms have laid the foundation for an increase in the productivity of labor and in the income of the collective farm members.

The kulaks were the only section of the population who suffered a loss in income. This was due to the determined attack made

upon them in those districts where complete collectivization had not brought about the absolute destruction of their economic importance.

The rise of state and collective farms has converted the Soviet Union into a country of large-scale agriculture. This considerably increases the rôle of planning in agriculture. From the very first day of its existence every state and collective farm is faced with the task of working according to a plan. It must utilize all its machinery and implements in a rational and efficient manner, in order to bring about an increase in the productivity of labor and a considerable reduction in the cost of production.

In the past the work of individual farms was determined by the fluctuations of market prices. During the past few years fluctuations in market prices have been reduced to the minimum by the system of crop contracting. The contracts set the quantity of products to be handed over to the Government, and indicate the quality and price. In place of prices being controlled by market fluctuations, control is now exerted in the socialized sector by the fulfillment of the production plan and the calculation of expenses and production costs in a business-like manner. This rational control by society over the processes of production and the labor of the producers makes it possible to produce without waiting for the impetus of price changes, which formerly often swallowed up the entire income and resulted in bankruptcy. In addition, such a system of social control and regulation of production, supported by the socialist competitions participated in by the producers and the latter's personal interest in the efficiency of their labor, affords great possibilities for increasing the productivity of labor on state and collective farms. The recently published summary of a special census taken this spring of the collective farms in the Middle Volga Region shows that in this Region in 35 per cent of the collective farms, socialist competitions were in progress during the spring sowing campaign and that 38.5 per cent of the collective farms had shock brigaders in their ranks. These latter are workers who have already adopted the new attitude toward labor, whereby labor

is transformed "from the shameful and heavy burden it was once considered to be into a thing of honor, and glory" (Stalin). As the result of the development of these new forms of labor, the Middle Volga Region was the first to complete its sowing plan this year.

Agricultural planning has become a means of concrete guidance for the development of agriculture. According to the special census referred to above, the sowing plan adopted by the regional administration was 10,437,500 acres. When the collective farms considered the plan as applied to their farms, they adopted the regional plan without alterations in 77.3 per cent of all the collective farms, increased the tasks set in 15.6 per cent, and reduced the tasks assigned in only 7.1 per cent. As a result, the area to be sown was raised by the "counter-plans" of the collective farms to 10,723,750 acres, or an increase of 2.7 per cent over the original plan.

Planning is, in addition, a weapon in the struggle to lower production costs and reduce expenses. The organization of state and collective farms has resulted in a considerable reduction in the cost of agricultural production. Investigation of the budgets of a number of districts confirms this. The cost of production of winter wheat in the Northern Caucasus in 1926-27 was 4.6 rubles per centner on individual peasant farms and 2.9 rubles per centner on collective farms. The cost of production of rye on individual peasant farms was 4.3 rubles per centner, while on the big collective farms it was only 2.0 rubles. We get the same picture of reduced costs, if we compare state farms with individual peasant farms.

Agricultural planning is the basis for a rational geographical allocation and specialization of crops. The allocation of agricultural crops formerly had no rational basis. Land which was fully suitable for highly profitable industrial crops, in view of special climatic conditions, was used for grain production. The plan for the specialization of agricultural production has in mind the allocation of the various crops on a scientific basis, so that everywhere the most profitable crops and the most valuable branches of agriculture, from the social economic point of view, will be rationally introduced. The allocation and specialization

of state farms and machine-tractor stations depend primarily upon the plan of the allocation of agricultural crops.

The plan for the socialist development of the Soviet Union and of the agriculture of the country is now being put into effect with the maximum of energy. The enthusiasm and determination of the toiling masses is giving full effect to the creative guidance of the proletariat, and is emphasizing from day to day the enormous advantages of the socialist system. Nowhere are these advantages so obvious as in agriculture. Millions of toiling peasants have broken away from ancient tradition and from the limitations of small-scale production. Small-scale production has been superceded by large-scale production, and individual peasant farms by large collective farms. Reliance on the vagaries of the market has been replaced by planned, scientific guidance.

Planning operates as a tremendous lever for the uplifting of agriculture, for the elimination of the contradictions between town and village, and for the creation of coordinated, highly efficient, technically and socially uniform production both in industry and agriculture. This is the historical significance of planned socialist development of agriculture in the Soviet Union.

LABOR IN SOVIET PLANNED ECONOMY BY I. A. KRAVAL, DIRECTOR OF THE LABOR RESEARCH INSTITUTE, MOSCOW.

In submitting this paper on labor conditions and the nature of labor relations in the Union of Soviet Socialist Republics, I consider it unnecessary to deal with those historical events which led to the victory of the working class in so vast an area of the earth's surface, and which have made it possible for the Soviet Union to play an increasingly important role in the general scheme of world economy. Nor is it within the scope of this paper to outline the historic tasks which confront the proletariat of the Soviet Union at the present time, particularly as a result of the general economic and financial crisis in which the capitalist countries are increasingly involved.

This paper will confine itself to an exposition of those features which are most characteristic of the social system evolving in the Soviet Union. It will analyze these features concretely. A peculiarity of the Soviet type of economy is its high rate of development. Once our industry had been restored to its former level, our working class was confronted with the question of the rates of development to be maintained. It had to solve the problem of increasing the national income and expanding the army of producers by placing our entire economic system on a solid basis of modern technique.

The Soviet economic system is developing at a rate utterly beyond the reach of the capitalist system, because its development is free of the anarchical features of capitalism and does not contain within itself the antagonisms peculiar to capitalism. The Soviet Union finds it possible, steadily and progressively, to accelerate the speed at which it is moving forward and to carry out its program of overtaking and surpassing the advanced capitalist countries, in order to produce the conditions necessary for bettering the lives of the toilers. Once we have taken the road of rationalization based on the advance of modern technique, it becomes our basic task to effect further rationalization. We need not fear that the labor power thus set free cannot be used elsewhere for productive labor; on the contrary, the work of new construction that is proceeding on such an enormous

scale is drawing fresh armies of producers into the process of social labor. Moreover, we can effect a considerable reduction in the working day, raise the workers' living standards, and utilize the surplus product obtained as the result of rationalization for the purpose of expanding production and increasing the consuming power of the masses of the population.

Planning in the field of labor involves the following problems: meeting the requirements of agriculture for various kinds of skilled labor now needed as a result of the industrialization of agriculture; finding ways and means for keeping track of all the surplus labor power in agriculture set free as a result of mechanization, and distributing this surplus labor among the various branches, trades, and regions of industry; training skilled workers and engineers; qualifying workers for promotion from less skilled to more skilled work; specialized training of workers in accordance with the equipment they have to handle and the work they have to perform; regulating wages for the various categories of labor; increasing labor productivity and improving technique, in order to better the general welfare of the workers; and elaborating and carrying out a program of health and safety measures.

It is impossible to understand labor conditions in the Soviet Union, if Soviet economy is considered merely as planned economy. The decisive factor conditioning the rapid rate of Soviet economic growth is the powerful development of socialist forms of labor organization. These forms are based upon the fact that the workers are conscious that they toil only for themselves and that they are not only producers but also organizers of production. In a relatively short space of time we have passed through several stages in this field: from individual socialist competition to the shock brigades, to production collectives and inter-departmental brigades, which, in the course of their development, constantly create new forms. These socialist forms of labor organization are producing, in Stalin's words, "a radical change in man's attitude toward labor, transforming labor from the shameful and heavy burden it was once considered to be into a thing of honor and glory".

The most important problem of socialist competition has been to get the industrial-financial plan individualized for every department, every worker, every machine in the factory. It was necessary not only that the working class as a whole should direct industry but that every individual worker should understand his part in the total scheme of production and the connection between his own work and that of other workers in the same or allied branches of industry. It was only when that stage had been reached that we were able to achieve results whereby the workers, utilizing all the internal possibilities and resources of the plant, could play a decisive role in the drafting and execution of the production plan.

It was at that stage that there began to develop and grow the system of so-called "workers' counter plans". This system has already given us enormous practical results and has aided us in stopping the activities of counter-revolutionary groups intent upon wrecking industry. In all cases the discussion and adoption of workers' counter-plans have been accompanied by numerous inventions and suggestions for rationalization, which have resulted in improving the process of production and increasing the productivity of labor.

In this task the working class has encountered and still encounters serious difficulties. Some of these difficulties are a result of the very considerable labor turnover arising from the exceptional ease with which jobs may be obtained in the most varied branches of industry, the remarkable mobility of labor fostered by large-scale production, and the tremendous amount of new construction work going on everywhere.

This labor turnover alone is an effective reply to those who attempt to find elements of compulsion in our labor system. It is, indeed, a strange kind of "forced labor" which allows any worker to pass freely from one branch of industry to another and results in an enormous fluctuation of labor. The struggle against this fluctuation in not easy and is carried on through the self-discipline of the workers. In the majority of plants many workers pledge themselves not to leave their posts until the main problems confronting Soviet industry are solved, to

stay in their particular factory or plant until the completion of the Five-Year Plan. In this manner the more advanced workers constitute an example for the more backward workers, organize them, and bring them to a full consciousness of their general class interests.

American authors specializing in questions of psycho-physiology and psychotechnique, such as Scott, Tead, and Metcalf, emphasize the significance of the "attraction of work" and "actively interesting" the worker in his work. American employers know how to arouse personal ambition by various means: by drawing the workers into profit-sharing schemes, by encouraging different categories of workers to compete with one another, by threatening them with unemployment. In these ways the employers attempt in their own interest to incite the masses of workers to activity.

Under our system the advanced section of the proletariat influences the less advanced sections through convincing example and direct aid. Only in exceptional cases is social pressure brought to bear upon individual unworthy workers who may be subjected to social ostracism, informal comradely trials, and so on. These means for maintaining workers' discipline are possible in the Soviet Union because the workers themselves are the organizers of production. Our system of free labor on a cooperative basis, combined with the enthusiasm of the masses for their work, has created unlimited possibilities. As a result of this enthusiasm we have been able to attain such an enormous rate of development for the whole of our national economy that in a short space of time it has been possible to eliminate unemployment, to employ increasing numbers of workers in all the main branches of industry, and at the same time, to bring about a constant improvement in the material welfare of the toilers.

The expansion of Soviet industry has been accompanied by a great growth in the number of Soviet wage-earners, as is indicated by the table on the following page.

The figures in this table show that the greatest gain in the number of workers has taken place in the building trades, where from

NUMBER OF WAGE-EARNERS IN THE U. S. S. R. 1923-24—1931.

Branches of Labor	1923/24	1924/25	1925/26	1926/27	1927/28	1928/29	1929	1930	1931 (program)	Per cent increase 1931 over 1923-'24
	(in thousands)									
I. Industry	2,148.8	2,498.3	3,105.0	3,261.4	3,441.5	3,677.7	3,761.0	4,636.0	5,159.0	140.0
a. Census Industry*	1,794.9	2,108.7	2,678.5	2,838.6	3,033.3	3,269.5	3,353.0	4,235.0	4,798.0	167.3
b. Non-census Industry	353.9	389.6	427.0	422.8	408.2	408.2	408.0	401.0	361.0	2.0
II. Construction	193.6	286.9	427.1	546.8	683.3	821.8	923.0	1,598.0	2,010.0	938.2
III. Transportation and Post and Telegraph	1,076.0	1,101.7	1,284.7	1,352.2	1,350.2	1,355.9	1,422.0	1,668.0	1,870.0	73.8
IV. Trade	279.3	420.0	532.2	583.1	588.1	688.3	704.0	848.0	938.0	235.8
V. Finance	47.8	66.1	82.4	85.9	90.6	99.9	114.0	122.0	122.0	155.2
VI. State Institutions	1,674.6	1,826.1	2,053.4	2,244.7	2,330.6	2,409.4	2,499.0	2,609.0	2,766.0	65.2
VII. Miscellaneous	57.1	63.8	73.6	86.7	95.3	102.0	103.0	109.0	114.0	99.6
Total (I-VII)	5,477.2	6,262.9	7,558.4	8,160.8	8,580.1	9,135.2	9,526.0	11,590.0	12,979.0	136.9
VIII. Migratory and part-time day workers	233.1	279.6	351.6	388.1	421.4	464.1	475.0	428.0	364.0	56.1
IX. Domestic help	132.7	192.8	242.7	318.2	368.4	399.7	404.0	411.0	370.0	178.8
Total non-agricultural labor	5,843.0	6,735.3	8,152.7	8,866.1	9,369.9	9,998.0	10,405.0	12,429.0	13,713.0	134.7
X. Agriculture	1,300.0	1,820.3	2,045.1	2,124.0	2,086.0	2,138.0	1,989.0	2,158.0	2,587.0	99.0
State farms	—	—	—	—	—	317.0	399.0	694.0	1,289.0	—
Grand total	7,143.0	8,555.6	10,207.8	10,990.1	11,455.9	12,136.0	12,394.0	14,587.0	16,300.0	128.2

* Census industry includes all industrial establishments employing 15 workers or more and using mechanical power and all those where no mechanical power is used but employing at least 30 workers.

1923-24 to 1931 the number of workers employed has increased by 938 per cent. On the state farms the number of workers employed has quadrupled in the last three years. In census industry the number of workers has increased by 167 per cent in the past seven years, while the number of workers in the non-census industry has remained stable.

While new strata of workers are being constantly drawn into the process of social production, there are no blind-alley trades in the Soviet Union, nor are workers doomed to unskilled labor. There is a steady advance in the skill of the huge army of workers building up Soviet industries. This is most clearly seen in the development of all sorts of measures enabling the workers to learn any trade and obtain any technical training and knowledge they may seek.

The figures in the following table give some indication of this work:

NUMBER OF PUPILS IN THE GENERAL EDUCATIONAL INSTITUTIONS OF THE U. S. S. R.

Type of Institution	1914	1923	1924	1925	1926	1927
	(In thousands as at the end of each year)					
Kindergartens and creches	—	59.1	60.2	72.7	86.5	103.8
Children's playgrounds	—	—	—	—	—	204.0
Elementary Schools (four-year course)	7,235.9	7,093.8	8,307.3	9,197.4	9,498.3	9,942.0
Secondary Schools (three to five year course)	564.6	734.7	832.6	996.5	1,203.2	1,430.8

Type of Institution	1928	1929	1930	1931	Per cent increase 1931 over 1923
Kindergartens and creches	128.4	173.2	318.2	620.7	950.3
Children's playgrounds	323.6	581.2	1,753.5	4,222.8	—
Elementary Schools (four-year course)	10,375.0	10,452.2	11,775.5	17,342.3	144.5
Secondary Schools (three to five year course)	1,436.0	1,444.9	1,599.2	1,980.2	169.5

The total number of students in the elementary and secondary schools increased from 7,800,000 in 1914 to 11,900,000 in 1929. The year 1931 witnessed a tremendous development of the

network of schools with a view to carrying out the measures providing for universal elementary education.

During the past few years the development of the network of trade and technical schools has advanced at a rate even more rapid than that of the general schools. Various government decrees have recently been issued with the aim of extending the training of workers for all branches of the national economy. The following table shows to what an extent this work has developed in the past few years:

NUMBER OF PUPILS ATTENDING TRADE AND VOCATIONAL INSTITUTIONS IN THE U.S.S.R.

Type of Institution	1914	1928	1929	1930	1931	1932 as per original Five-year Plan	1931 Percent increase over 1928
	(In thousands as at the end of the school year)						
Higher educational institutions, total	109.9	191.5	218.2	291.4	358.2	209.0	87.1
Industrial and agricultural	—	113.9	141.2	210.3	255.5	133.0	124.3
Secondary technical schools, total	—	183.1	316.3	578.7	609.8	327.0	233.1
Industrial and agricultural	266.9	101.9	184.7	378.9	444.4	148.0	336.1
Factory training schools	—	153.3	163.3	568.9	1,197.8	430.0	681.3
Workers faculties*	—	56.6	68.2	247.5	331.7	72.0	487.1

* Special schools for preparing factory workers for the higher educational institutions.

In this connection it may be noted that, while in the majority of the branches of national economy the Five-Year Plan is being carried out in four and in some cases even in three years, as regards the training of workers for industry it is being carried out at an even more rapid pace. Thus, as early as 1931, the schedules set by the Five-Year Plan for 1932 had been exceeded by 70 per cent as regards the higher educational institutions, and by 85 per cent for the secondary technical schools. Attendance was three times as large as originally planned in the factory

training schools, and four and one-half times as large in the workers' faculties.

In 1914 the number of students in the higher institutions of learning was 109,900. By 1931 this number had more than trebled, totaling 358,000. In 1914 the number of students in the elementary and secondary trade and technical institutions totaled 267,000. In 1931 the number of students in the technical and factory schools alone (exclusive of vocational schools, vocational workshops, and the like) totaled 1,808,000 or practically seven times the pre-war total. In addition, several million workers, employees, and collective farmers are at the present time extending their education by means of evening schools, correspondence courses, etc.

In 1931 the Soviet budget appropriated for workers' education a sum seven and a half times the amount spent in 1914.

In this connection it is worth noting the restriction of the sums spent for universities, laboratories, publication of scientific work, and scientific research institutions, not only in vanquished Germany but also in victorious England, France, and even the United States. Professor Matchoss, head of the Society of German Engineers, has published in the Society's official organ an analysis of the effects of the economic crisis on technical education.

According to Professor Matschoss, about 40,000 young people study in the technical universities and technical schools of Germany, of whom nearly 8,000 finish their studies. Unemployment prevails among these graduates to an alarming extent. On an average, about 20 per cent of them find positions, 10 per cent continue their studies, 20 per cent accept any kind of work outside of their profession, and the remaining 50 per cent have no income whatsoever. Professor Matschoss declares that it is not rare to find graduate engineers "who have the use of a bed only from 10 o'clock in the evening, who no longer know what warm food is, who consider themselves lucky if they are able to earn a few marks at any kind of work, even as dish-washers, cigarette clerks, or dance hosts".

Professor Matschoss then shows how various organizations at-

tempt to assist the young engineer, adding: "Only one thing cannot be done, and that is to provide these numerous graduates with work in the same manner as the others. For a while he leaves the streets, and is free from the tortures of realizing that he is compelled to let his intellectual epuipment, gained at great sacrifice, lie fallow; he can secure for himself the desired "uninterrupted" career, and to the question, "What have you done since your graduation?", he need no longer answer merely "I have looked for work."

Professor Matschoss cites the following figures regarding unemployed engineers: "Today the number of unemployed university men is estimated at 30,000; it is estimated that by 1934 the figure will rise to 130,000." *

This situation prevails not only in Germany but also in the victorious countries. For example, leading American technical journals publish striking letters from trained engineers who completely despair of their efforts to find work. Other sections of the intelligentsia find themselves in the same position. Indeed, the position of the scientific worker has not only not improved, but has actually become worse.

During the past two years there has been an especially intensive development of the network of vocational educational facilities in the Soviet Union. During this period the difference in the rate at which specialists have been trained in the Soviet Union as compared with Germany and most other capitalist countries has become especially marked. At the present time we are setting to work to organize the general technical training of the workers, a problem which must and undoubtedly will be solved within the next three years.

In addition to the extension of vocational and technical training, there are certain aspects worth emphasizing, since they differentiate the Soviet system from that of narrow craft training typical of vocational education in capitalist countries. The following table, for example, shows how the working class of the

* Professor Matschoss: "Arbeitslose Absolventen". Nachrichten-Mitteilungen des Vereins Deutscher Ingenieure und des Deutschen Verbandes Technisch-Wissenschaftlicher Vereine, Berlin, March 11, 1931, No. 10.

Soviet Union has been extending its hold in recent years over the secondary and higher vocational and technical schools:

SOCIAL STATUS OF STUDENTS.

Year	Higher Schools (including Technical Schools)			Secondary Technical Schools		
	Workers	Peasants	Others	Workers	Peasants	Others
	(in percentages)					
1927	38.3	14.6	47.1	—	—	—
1928	42.4	13.7	43.9	—	—	—
1929	46.4	12.8	40.8	58.5	14.0	27.5
1930	56.4	12.5	31.1	67.6	14.0	18.4
1931	63.7	13.3	23.0	73.2	13.4	13.4

What may be called the conquest of higher education by the working class has now proceeded furthest in those educational institutions which train students for skilled industrial work. Almost two-thirds of the total number of students in the higher technical educational institutions and three-fourths of the students in the secondary technical schools are composed of workers and the children of workers. Thus, in training technicians on a mass scale, we are able to draw upon members of the working class who are thoroughly devoted to the great work of building socialism.

To an increasing extent public education and the training of industrial specialists in the Soviet Union is becoming a mass movement of the workers themselves. It is an organized struggle by the working class and the toiling peasants who follow its lead to master culture, science, and technique.

The planned system of socialist construction, the introduction of large numbers of people into productive labor, and the steady improvement in their skill as workers is resulting in constant improvement in the material welfare and general living conditions of the workers and in a steady rise in their cultural level. The wellbeing of the Soviet workers cannot be measured by the amount of wages they receive. In the Soviet Union wages play a role which cannot be gauged by capitalist standards. In the socialized sector of Soviet economy wages do not represent

the value of labor power, since the worker does not sell his labor power. Under the socialist system of economy prevailing in the Soviet Union labor power is not a commodity. In capitalist economy the standard of living of the proletariat is determined by the wages each worker receives individually in exchange for his labor power. In the Soviet Union, on the other hand, the worker is paid "wages" in accordance with the amount and quality of his individual labor, but in addition there exist a number of other forms of distribution of wealth, in which the collective nature of labor comes to the fore. These inclule workers' welfare funds, social insurance, funds for the training of industrial workers, the construction of houses, public services, and other socialized forms of wages.

But even "wages" in the sense used in capitalist economy have been increasing steadily in the Soviet Union. From 1924 to the first quarter of 1931 the average monthly wage of the workers in socialized industry has increased as follows:

	1924	1925	1926	1927	1928	1929	1930	1931 1st.quart.
All census industry	39.48	47.81	57.02	64.64	70.94	77.65	83.30	90.70
Coal mining	38.29	42.86	53.87	59.34	63.27	68.81	76.47	83.97
Iron & steel	34.27	46.13	58.42	68.79	75.61	83.82	88.30	90.05
Machine-building	44.92	57.79	69.78	82.37	92.94	103.29	108.36	118.00

For the period from 1924 to the first quarter of 1931 average wages increased 130 per cent for industry as a whole. In the metallurgical and machine building industries wages increased 170 per cent.

In analyzing wages in the Soviet Union bourgeois economists - and certain economists from the camp of the Social Democratic Party and the trade unions affiliated to the Amsterdam International - are inclined to argue as follows: If we exclude from the total income of the Soviet proletariat that part of the income of the socialist industries which is used for socialist accumulation, what remains for distribution among the individual workers is no greater than the share of the national income obtained by the proletariat in capitalist countries.

(Continues under table on page 137.)

The following figures indicate the improvements made in the material position of wage-earners in the Soviet Union:

Wage Funds	1927/28	1928/29	1929/30	1931	Percent increase 1931 over 1927/28
	(in million rubles)				
Individual wage fund	7,801.0	9,640.0	12,508.0	15,368.0	97.0
Ratio to 1927/28	100.0	123.0	160.3	197.0	—
Socialized wage funds:					
1. Social insurance	980.1	1,176.0	1,514.0	2,173.0	118.1
2. Industrial workers welfare *)	60.0	88.0	125.0	285.0	375.0
3. Additional expenditure by the enterprise (free municipal services, promotion of cultural welfare etc.) *	355.8	440.2	574.6	679.6	91.0
4. Housing construction	419.7	510.9	595.0	1,117.0	166.1
5. Educational fund	994.0	1,448.0	2,700.0	4,088.0	311.3
6. Health services	552.0	670.0	997.5	1,271.0	130.2
7. Socialized restaurants	10.0	25.0	65.0	120.0	1,100.0
Total:	3,371.6	4,358.1	6,571.1	9,733.6	—
Ratio to 1927/28	100.0	129.3	194.7	287.6	—
Ratio to individual wage fund	43.2	45.2	52.5	63.1	—

* The amounts given under items 2 and 3 are smaller than the actual, since they include only expenditure for workers in industry and not those for workers in transportation, etc.

This viewpoint is, of course, entirely erroneous. The share of the national income which goes to a Soviet worker in the form of individual wages really constitutes only one part of his actual income. Under Soviet conditions the structure of the national income is such that "wages" represent a purely relative conception, and even this share of the national income represents only part of the means for the reproduction of labor power. The rest of it is comprised in the funds of the socialized enterprises, and is represented in expenditure for such items as social insurance, workers' welfare funds, etc. Furthermore, it is necessary to take into consideration the huge appro-

priations of the state budget for public education, health services, and housing construction, which likewise represent socialized means for the reproduction of labor power. In these fields there has been an exceptionally rapid rate of development.

These items by no means exhaust all the ingredients of what may be called "socialized wages". Millions of rubles are spent on annual vacations with full pay. In 1927-28 a total of 107,000,000 rubles were spent on such vacations; in 1931 the total rose to 364,000,000 rubles. Another such item is the maintenance of students in the factory training schools. which involved an expenditure of 19,000,000 rubles in 1927-28. This sum increased to 154,000,000 rubles in 1931, an increase of over 700 per cent in the short space of four years. There are many other items involving large expenditure by the state which serve to increase considerably the amount of socialized wages. It will suffice to mention one such item - the short-term training courses for workers, now organized on so wide a scale as to embrace over a million workers and involving an annual expenditure of more than 235,000,000 rubles.

In the Soviet Union we are witnessing a process which stands in striking contrast to what is going on in all the surrounding capitalist countries. We have from year to year a steady reduction in the proportion of low-paid workers, as is clearly indicated by the following table:

PERCENTAGE OF WORKERS RECEIVING MONTHLY WAGES OF:

Years	Less than 40 rubles	40-60 rubles	60-80 rubles	80-100 rubles	100-150 rubles	over 150 rubles
1923	63.8	22.8	8.7	3.2	1.4	0.1
1924	52.4	28.3	11.4	4.6	2.9	0.4
1925	31.4	31.2	18.2	9.8	8.0	1.4
1926	21.3	31.4	22.2	12.7	10.6	1.8
1927	13.7	27.2	24.7	15.0	15.4	4.0
1928	11.1	25.6	24.8	16.8	17.2	4.5
1929	9.8	25.4	25.0	17.2	17.9	4.7
1930	8.0	20.9	23.4	18.2	21.9	7.6

These figures show that in 1930 the proportion of workers with monthly wages of less than 40 rubles amounted to only about one-eighth of that in 1923, while the proportion of workers

earning over 100 rubles was almost twenty times as great.
Equally striking has been the improvement registered during the same period in the living conditions of the workers employed on the state farms. The widespread development of state farms and their specialization and re-equipment have been accompanied by increases in the wages paid to the workers they employ, as shown in the following table:

AVERAGE MONTHLY WAGES OF WORKERS ON STATE FARMS.

	1928	1929	1930	1931
		(in rubles)		
All workers	22.40	26.33	40.00	55.35
Permanent	34.00	38.50	53.58	60.66
Seasonal	28.16	35.00	40.66	48.72
Casual	17.08	19.16	30.83	50.16

Thus, in 1931 the wage level on state farms is 2.5 times that of 1928. It should be noted in this connection that on certain state farms, such as the „Gigant", in the Northern Caucasus, the wages of the workers in 1930 had already attained the level of the average wages earned by industrial workers in that region. This indicates that progress has been made in eliminating the gulf which has hitherto existed between the city and the village.

The steady increase in wages has been accompanied by a decrease in working hours. In Tsarist Russia workers sometimes worked 16 to 18 hours a day. A 10- or 12-hour day was the common thing in pre-revolutionary Russia. It was only after the November Revolution that the 8-hour day became, both in law and in practice, the maximum working day for the adult population and the 6-hour day the maximum for miners. It was also the Soviet regime which introduced the 7-hour day. The length of the working day has undergone the following changes:
In 1904 the average working day for Russian industry as a whole was 10.7 hours; in 1913 - 9.87 hours; in 1918 - 7.69 hours; and in 1931 - 7.02 hours. In the coal industry the length of the working day has been reduced from 10.06 hours in 1913 to 7.0 hours in 1931; in the metal industries from 10.07 to 7.10 hours; in the machine-building industry from 9.73 to 6.25 hours;

in the chemical industries from 10.1 to 7.0 hours; and in the textile industry from 10.11 to 7.02 hours.

Soviet law prescribes a shorter working day for harmful and dangerous industries. Thus, in 1928, even before certain industries were put on the 7-hour day, 14.62 per cent of the workers had short working days. These included 14.4 per cent of all the adult male workers in the country, 4.72 per cent of the adult women workers, and 99.17 per cent of the minors.

In order to obtain the greatest possible use from the machinery and equipment in certain types of factories which work on the multiple-shift system, it has been found necessary to increase the working day to 7½ hours. The Government, however, has passed a law requiring industrial and labor bodies not to allow the total number of hours which the worker puts in per month to exceed the former limit, namely, 168 hours (7×24). Under this system for each four days of work the worker gets two days, or forty-eight hours, of rest.

In addition to the establishment of the seven-hour day, there has been a further reduction of the working time through the establishment of the five-day working week. Under this system the machines work uninterruptedly, while each individual worker works only four days out of a five-day week. At present more than two-thirds of the workers in industry are embraced by the five-day week system.

There are also other factors which enter into shortening the Soviet working day, such as the right of the worker to take time off for regular meals, the time allowed off for nursing mothers, and the practice now being adopted in Soviet industry of allowing free periods for rest and physical exercise.

This year 70 per cent of the Soviet workers are on the seven-hour day; in 1932 it is planned to have 92 per cent on the seven-hour day. At the beginning of the second Five-Year Plan, it is intended to establish a normal working day of six hours, as provided by the program of the Communist Party.

The profound difference between the socialist and the capitalist economic system is manifested with particular clarity in the sphere of labor protection. Under the Soviet system special stress

is laid upon creating labor conditions which conform to the highest standards of safety and sanitation. In reconstructing factories and building new ones special attention is given to such problems as proper lighting, ventilation, working clothes, safety devices, and sanitation. In the Moscow Region, for example, where the textile industry is particularly developed, only 71 textile mills had ventilation systems prior to the Revolution. In the six years from 1925 to 1931 a total of 1,080 new ventilation systems were installed. Each enterprise allocates part of its budget for safety and sanitation devices; in addition, the national economic plan provides special funds each year for this purpose. Thus the Soviet Government in 1928-29 spent 54,500,000 rubles for safety and sanitation in industry, while in 1931 a total of 124,000,000 rubles will be spent in industry and 30,000,000 rubles in transportation. As a result of these measures, the number of cases of industrial accidents and disease is declining. The insurance organizations of the Soviet Union report that in the year 1925-26 there were 10.7 days of sickness per worker, while in 1931 there were only 9.0 days.

In this connection it may be pointed out that under the Soviet system of recording industrial accidents not a single case can be overlooked. Since there are no private insurance companies in the Soviet Union, there is no tendency to conceal or minimize industrial accidents or to shift the burden to the hospitals.

Social insurance legislation in capitalist countries creates a form of statistics which tends to conceal the facts. Nevertheless, even on this basis the index of fatal industrial accidents in the Soviet Union in 1929 was considerably lower than in Germany or the United States. In Germany the figure was 0.45 fatal accidents per 1,000 fully insured persons; in the United States, 0.4; while in the Soviet Union it was only 0.26. The same is true regarding serious, but not fatal, industrial accidents.

The systematic work being carried on in the Soviet Union to improve labor conditions has resulted not only in a lower percentage of accidents as compared with other countries but also in an absolute reduction in the proportion of accidents from year to year. A recent investigation of large plants in the Soviet Union shows a considerable reduction in accidents. Thus, acci-

dents at the big "Red Putilov" plant in Leningrad decreased by 8.6 per cent in one year; at the Electrosila works by 16.6 per cent; at the Electric plant by 25.1 per cent; at the Baltic shipyards by 34.4 per cent; at the Optical works by 36.6 per cent; and in some factories as much as 50 per cent.

This reduction of accidents took place notwithstanding the fact that the piece-work system prevailed in the plants mentioned. It must be taken into account, however, that, under Soviet conditions with the constantly growing activity and conscientiousness on the part of the workers and the widespread application of socialist forms of work, piece-work does not result in an increase of industrial accidents. On the contrary, due to the heightened enthusiasm and concentrated will power of the workers, the piece-work system tends rather to diminish the number of accidents.

Labor protection in the Soviet Union is not left to chance or caprice, but is based on the theoretical material furnished by a large number of scientific research institutes. There are at present 80 institutes and laboratories engaged in research on labor conditions. The joint budgets of these institutes total 7,500,000 rubles annually. They are not isolated but work in close cooperation with the factory laboratories and research departments as well as with an extensive network of special technical research institutes which are subsidized independently.

Measures taken in the sphere of social insurance are as extensive as those in the sphere of labor protection. In the Soviet Union social insurance embraces all persons employed in any branch of the national economy and covers all forms of social risk. It also embraces the vast majority of students. There is, of course, no capitalist country having an insurance system which is at all comparable in extent to that in the U. S. S. R.

The overhead of social insurance in the Soviet Union is only 1 per cent of the total expenses, as compared with Germany, for instance, where the overhead is 10 per cent. On the other hand, the expenses in rubles per person insured in the various countries are as follows: England - 53.78 rubles; France - 47.75 rubles; and the Soviet Union - 131.57 rubles.

 The sharp decrease in sickness in the Soviet Union and the

efforts to improve the health of the Soviet working population were accompanied by an increase in insurance expenses, chiefly in connection with the improvement of medical facilities. In this field alone the expenditure paid out of the social insurance fund rose, per person insured, from 22.10 rubles in 1927-28 to 32 rubles in 1931. Closely bound up with the medical facilities are the prophylatic facilities, such as convalescent homes, sanitoria, health resorts, etc., in which at least 80 per cent of the places are reserved for workers. The number of persons in convalescent homes rose from 437,200 in the year 1927-28 to 799,440 in the year 1931, while the number in the sanitoria rose from 74,200 in 1927-28 to 125,600 in 1931.

Soviet social insurance makes special provisions for taking care of invalids, orphans, and old people. For this purpose 306,100,000 rubles were allocated for 1929-30 and 371,400,000 rubles for 1931.

In the year 1931 a total of 1,234,200 persons received insurance benefits. Of these 680,000 were incapacitated through general illness and 54,900 suffered from industrial accidents or occupational diseases. This number also included 426,000 families whose breadwinners had died from natural causes and 19,200 families whose breadwinners had died from an occupational accident or disease.

Soviet social insurance provides still other forms of assistance, such as for the nursing of infants, feeding of school children, and burial, for which the sum of 60 million rubles has been appropriated in 1931. The Soviet insurance organizations also participate in such activities as housing construction, for which they appropriated 331 million rubles in 1931; child nurseries and milk centers, for which they appropriated 22 million rubles; kindergartens and the feeding of children for which they appropriated 20 million rubles; and the training of skilled workers, for which they appropriated 100 million rubles.

No analysis of the status of the Soviet worker would be complete without mention of the housing situation. Beginning with the year 1924 the rapid reconstruction of the heavy industries resulted in a considerable increase in the number of workers

living outside of the urban area in which they worked, while the houses inherited from pre-revolutionary days proved insufficient in number and unsuitable in character and quality.

The housing problem was aggravated by the fact that many new workers came from other districts. Beginning with the year 1928, this tendency became particularly acute. The rapid expansion of industries in the old industrial centers was accompanied by the development of new centers of population. The absence of a sufficient number of old houses to meet the new waves of population which came pouring in, resulted in an acute housing crisis.

A large part of the budget allocated to housing construction goes to new settlements, to the extent of 45 per cent in 1929-30 and 57 per cent in 1931. There has also been a large increase in the number of workers who live with their families in houses belonging to the various industrial enterprises. While in 1921 the number of workers living with their families in the houses of the Azerbaidjan Oil Trust was 22 per cent of the total number employed by the Trust, in 1926 the proportion had increased to 78 per cent. The dwelling space occupied by workers' families in houses of the Azerbaidjan Oil Trust amounted to 57 per cent of the total dwelling space.

Despite the complexity of the housing problem with which Soviet industry is faced, considerable progress has been made in the past few years in solving this problem, thanks to the great increase in capital investments in housing construction. Thus, in the year 1927-28, all Soviet industries jointly invested 419,700,000 rubles, while in 1931 the amount to be invested for housing construction is 1,117,000,000 rubles. The increase of investment in housing construction greatly exceeds even the rate of increase in the number of workers.

In addition to the great increase in the number of workers' families living in houses belonging to industries, there has been a tendency in many regions to build workers' homes nearer the place of work. In the Donetz Basin, for example, the number of houses situated within one kilometer from the place of work constituted 41 per cent of the total in 1929, as compared with 15.8 per cent in 1923; within two kilometers, 30 per cent as

against 14 per cent; within three kilometers, 1 per cent as against 29.7 per cent.

The conditions of tenancy in the Soviet Union are completely different from those prevailing in other countries. Occupation of municipal-owned houses is not limited to any given period, nor can the worker be ejected from his home when he ceases to work for the enterprise which owns it. Rent is not established by contract. Above all, it is not determined by the amount of ground rent but in accordance with a scale based on class principles. The amount of rent depends upon the income of the tenant and the number of his dependents. Preferential rates are widespread. Certain categories of workers enjoy rebates of as high as 80 per cent. In capitalist countries a person's income determines the kind of house he can occupy; in the Soviet Union even the lowest-paid workers can live in the best apartments.

All of the measures outlined above for improving the material welfare of the Soviet workers have profoundly affected the trend of vital statistics. The Soviet working class had to overcome extraordinary difficulties: the sufferings of the civil war, the extremely unfavorable production and housing conditions inherited from the old regime, the famine and destruction which accompanied foreign intervention. The rapid development of economic life and the activity of the masses have overcome these difficulties and have raised the general level of living conditions. This general improvement is reflected in the birth and death rates. For purposes of comparison we may take the birth and death rates of German industrial workers as indicated by factory insurance fund statistics. These figures show that for every 1000 persons insured under the factory insurance system in Germany from 1909 to 1913, the annual death rate was 7.1 for men, 5.3 for women, and 6.8 for both sexes. In 1928 the figures were 6.9, 4.2, and 6.3; in 1929, 7.3, 4.5, and 6.7, respectively. The average age of the German workers has declined since the war; nevertheless, the death rate among German industrial workers has tended to increase rather than decrease.

The death rate among Russian factory workers in the years

1913-1916 was 8.0 per 1000 men, 5.1 per 1000 women, and 6.9 per 1000 of both sexes. Since prior to the revolution factory workers were practically the only workers entitled to insurance, in comparing the pre-revolutionary death rate cited with the present rate, we should not include all the Soviet workers who are insured but only the industrial workers. On this basis the death rates in recent years have been as follows:

	1924/25	1925/26	1926/27	1927/28	1928/29	1929/30
	(per thousand)					
USSR	6.0	6.0	5.4	5.1	4.8	4.3
RSFSR	6.2	6.2	5.4	5.2	4.9	4.4
Ukrainian SSR	5.0	4.9	4.3	4.3	4.0	3.5

It is necessary to take into account that there is an intimate connection between labor conditions and the increase in labor productivity. In capitalist society the reproduction of labor is regulated by wages, the only factor tending to stimulate an increase in the efficiency of labor. Under Soviet conditions the supply of labor power is, on the whole, subject to planning. At the same time, there are growing up new Communist forms of stimulating the productivity of labor, such as socialist competition and shock brigades, although wages still play a role in stimulating the efficiency of individual workers.

The planned growth of labor productivity in the Soviet Union is, of course, based primarily on the amount of electrical energy and capital available; but, in addition, the continual efforts of the Soviet Government to improve the material and cultural welfare of the workers, while shortening the working day and working week, have had a decidedly favorable effect upon labor productivity. The quantity of energy consumed in industry per worker in thousands of kilowatt-hours per year has been as follows:

1926/27	1928	1929	1930	1931
1.12	1.22	1.42	1.78	2.40

 The importance of this capital outlay in raising the productivity

of labor may be more clearly grasped by citing specific instances in a few industries. For example, in 1913 there were four coal-cutting machines in the Donetz Basin and only 0.5 per cent of the coal was obtained mechanically. In 1930, however, 56.3 per cent of the Donetz Basin coal output was obtained mechanically, and in 1931 the percentage will be raised to 78, the number of coal-cutting machines having been increased to 1,421.

In the oil industry the productivity of labor has undergone a radical transformation, due to the application of modern technique and improvements in the organization of oil production. In 1913 as much as 98.8 per cent entire oil output was produced by primitive methods; in 1929-30 only 3.1 per cent of the entire oil output was thus produced, while the remaining 96.9 per cent was extracted by mechanical means, by deep pumping, compressors, etc.

Labor productivity in the steel and iron industry increased primarily because of the installation of twenty-four new blast furnaces and sixty-one open-hearth furnaces in the past three years. Similar examples could be cited in all the other industries. The equipment of industry to a constantly greater extent with mechanical power and machines has led to the following increase in productivity per working-day:

LABOR PRODUCTIVITY PER WORKER PER WORKING DAY.

1921	1922/23	1925/26	1927/28	1928/29	1929/30	1931 (program)
(in rubles, 1926/27 prices)						
7.3	10.27	15.32	20.94	23.61	25.64	32.79

This uninterrupted growth in labor productivity creates the necessary material and technical basis for the systematic improvement of the living standards of the workers, and, at the same time, guarantees the necessary accumulation for the further acceleration of the rate of economic development.

It cannot be denied that in capitalist countries the growth in labor productivity in recent years has been due primarily to the lengthening of the working-day and the more intensive utilization of the workers' muscular power, while the increase in mechanical energy and equipment has lagged behind the growth in labor productivity.

LABOR IN SOVIET PLANNED ECONOMY

We shall now compare labor conditions in the Soviet Union and in capitalist countries as regards the various categories of labor, particularly in respect to the labor of women and children. In capitalist countries the employment of women and children in industry is a phenomenon analagous to the substitution of colored workers for white workers. It tends to injure the position of the working-class as a whole. On the other hand, the increased participation of women workers in Soviet production under the conditions of socialist construction has an entirely different economic significance. In the Soviet Union this serves to draw into the active processes of production new detachments of workers, to increase the general labor resources, and, at the same time, to free the women from the burden of the difficult home conditions typical of pre-war Russia. In Soviet economy the position of women as regards wages is not inferior to that of men; on the contrary, a series of laws has established measures for the protection of women workers and granted them special privileged conditions. There has been a great improvement in the cultural level and living conditions of women and in maternity and child welfare. The progress made in this field is unequalled, not only if compared with conditions prevailing in pre-war Russia but even if compared with those prevailing today in the leading European capitalist countries.

In the Soviet Union the introduction of women workers into industry does not serve to injure the conditions of the male workers. Under a Soviet system this would be unthinkable. It is worth noting that, although the number of women workers in Soviet industry has increased from 673,000 in 1927-28 to 1,276,000 in 1931, the percentage of women as compared with the total number of workers remains unaltered. The participation of women varies largely from industry to industry, ranging from 63 per cent in the cotton textile industry to 8 per cent in the metallurgical industries. Incidentally, it is absolutely impossible for us to understand the statement of the International Labor Bureau published in "L'Année Sociale", 1930, that Soviet agriculture is using women workers on an extensive scale in order to free the men for industry, and that in our industries women workers are most common in the textile and metallur-

gical industries. As a matter of fact, the workers on the Soviet state farms are made up as follows: women under 18 years of age constitute 0.5 per cent of the total; male minors - 0.9 per cent; women over 18 years of age - 12.5 per cent; and adult men 86.1 per cent. In the metallurgical industries, as has already been pointed out, women constitute only 8 per cent of the total number of workers.

Although for the time being it is necessary to employ women in certain branches of industry requiring little skill, the Soviet Union does not maintain the system of unequal pay for men and women performing similar work. Such unequal pay is a characteristic phenomenon in capitalist countries. *

In Germany, for instance, even in those industries where women workers predominate, such as the textile and clothing industries, the women workers receive only 65 to 73 per cent of the wages received by men. In the United States the difference between the wages paid to men and women performing the same work varies from 39 per cent in the printing industry to 64 and 70 per cent in the textile industry. In Great Britain the variation is from 42 per cent in the chemical industry to about 59 per cent in the textile industry.

We find a striking contrast to the above percentages, when we compare the wages of men and women workers performing the same work in the Soviet Union. In 1929-30 women workers in the engineering industries received 93.9 per cent of the wages received by men. In the textile industry women received from 85.2 per cent to 102.3 per cent of the wages received by men, depending upon the specific trade, with an average for the entire textile industry of from 97 to 98 per cent. In the printing industry the ratio of women's wages to men's wages ranged from 81.1 per cent to 94.5 per cent; in the rubber industry it was about 86.6 per cent, and so on. Since 1929-30 the situation has improved still further.

It must, moreover, be noted that there is a great difference as regards provisions made for the care of working women in the Soviet Union and in other countries, during pregnancy and childbirth. Working women in the Soviet Union are allowed

* See "Revue Internationale du Travail", April, 1931.

time off with full pay for a period of eight weeks before and eight weeks after child-birth; women office workers six weeks before and six weeks after child-birth. It must also be kept in mind that in the Soviet Union women are strictly forbidden to work immediately before or after child-birth. In most capitalist countries a brief leave of absence is granted only after child-birth. Before child-birth the working woman may take time off, if she so "wishes". We know, of course, what these "wishes" amount to in a period of economic depression and mass unemployment. In the Soviet Union alone does the woman who is to become a mother lose nothing from her wages. In the rest of the world motherhood means an unconditional loss in wages. This loss practically amounts to a punishment for motherhood. It is also necessary to take into consideration the tremendous sums spent by the Soviet Union for socialized restaurants, children's nurseries, kindergartens, sanitoria, and institutes of hygiene, which relieve women of a large part of their domestic burdens.

We shall now take up the question of child labor. In all capitalist countries child labor is still used and exploited in the most ruthless manner. In England the law of 1920 concerning minors in industry and the school law of 1921 contain some suggestions for the protection of child labor. Nevertheless, the report of the chief factory inspector for 1929 shows that the total number of children and youths under 18 years working in those shops and factories regulated by these laws constitutes only 16 per cent of the total number of young industrial workers. There are 97,000 minors working in the British mining industry, of whom 70,000 work undergound. No less than 400,000 minors work in industries which are not included in the scope of these laws, such as transportation, messenger service; theatres and places of amusement, commercial enterprises, etc. The chief inspector's report shows a widespread violation of the laws regulating the employment of minors. Judging from the number of accidents, the intensity of labor is very great. Thus, in 1929 about 16 per cent of the total number of accidents involved young workers. The number of accidents was particularly great

among girl workers, to whose share fell 30 per cent of the total number of accidents among women workers. The condition of children and minors in non-industrial enterprises is still worse.

During February and March there were discussions of Lord Astor's proposals regarding child labor. Various speakers made it clear that, judging by the reports of the government commission, the condition of the British working-class youth in 1931 in no way differs from their condition in 1913. This year 186,000 young workers are employed as messenger boys, porters, etc. and 250,000 are working in hotels, clubs, and restaurants, where the working day is often as long as 12 hours or even longer. Many youths are working as elevator boys, in gardens, etc., in reality serving a small group of parasitic elements.

The Anderson Commission, which investigated child labor in Egypt in the winter of 1930, reports that in Egypt only a small part of the women workers are adult women, while the majority are children seven or eight years of age. Until very recently the work of cleaning and operating machines in the old factories was performed by children, for the most part not over nine or ten years of age and in no case older than fifteen. As a result, there is an unusually large number of accidents among these children. There are no safety regulations whatsoever.

In the United States, despite the fact that official reports record that existing industrial conditions are destructive to the physical and spiritual development of child workers, all attempts at securing a unified federal law for the protection of child labor have so far failed. According to data of the factory inspectors, out of a total of 12,176 young workers in New York State 3,611 were working illegally, some of them in dangerous industries, and 2,836 either had no labor certificates or were working longer hours then specified by law. In the United States as well as in Europe the factory inspectors are charged with the duty of seeing that the laws regulating child labor are carried out. However, the ineffectiveness of these laws is indicated by the fact that out of 924 cases prosecuted in New York for the violation of child-labor laws only 204 manufacturers were fined, that is, less than one-fourth. All the others

received only conditional sentences.

The investigations of the Wheatley Commission in India and the Anderson Commission in Egypt have shown that matters are still worse in the British colonies. They are equally bad in China and Japan.

In the Soviet Union, on the other hand, the employment of children under sixteen in industry and transportation is forbidden, while all employed youths over sixteen receive the same wage as adults performing the same work. Young workers are trained without any cost to themselves and receive pay while learning. The masses of the Soviet Union cannot understand how it is possible to exploit and exhaust children instead of teaching them and developing their powers. Child labor in the capitalist countries appears to the Soviet workers as a symbol of extreme backwardness, as utter barbarism. An investigation by the United States Department of Labor in the canning industry in seven states revealed that out of the total number of young workers under sixteen years of age employed in this industry, 78 per cent worked illegally, i. e., they were younger than the legal age limit. Sixty-nine per cent of the total number of young workers toiled ten hours a day or more, 22 per cent twelve hours a day or more, and 37 per cent worked nights.

It will be useful to supplement this review with some statistics characterizing the economic conditions of the proletariat in the capitalist countries. For the purpose of analyzing the movement of wages we shall deal with the three leading capitalist countries, Germany, England, and the United States. In France the data regarding wages of workers in that country compiled by the "experts" is so poor that we shall touch upon them only in passing.

The movement of wages, both nominal and real, of industrial workers in Germany is given in the following table:

Year	Employment index	Cost of living index	Nominal wages (total fund) index	Real wages (total fund) index	Ratio of wages to minimum budget	Ratio of taxes and other obligatory payments to wages
			(in per cent)			
1913/14	100	100	100	100	87.1	—
1925	96	140	121	86	77.8	7.0
1926	85	141	115	81	74.4	9.0
1927	94	148	133	90	85.1	10.0
1928	94	122	143	90	87.1	11.0
1929	90	154	143	93	85.0	11.0
1930	79	147	126	86	77.7	13.0

If we refer to the latest data of 1931, we find that the wages of the German worker are being systematically lowered. In 1930 the average weekly wages of the German worker amounted to 51.1 marks; in 1931 they were lowered to 30.25 marks. The data of the German economist Kuczynski * confirm the trend indicated by us. From the table given above it is clear that in comparison with the pre-war period, when the wages of the German worker were already entirely insufficient for the maintenance of his family, the economic condition of the German worker has become considerably worse.

Bourgeois economists in the United States established a worker's budget constituting the minimum necessary for the maintenance of a family of five. In the years preceding the crisis it amounted to $ 2,100 a year, the so-called budget that guaranteed a healthy maintenance of existence. According to statistical data which take no account of unemployment, wages of the majority of skilled workers amounted to only 74 per cent of this minimum wage in the year 1929; of unskilled workers to only 58 per cent; and in some branches of industry, the textile industry, for example, the average wage amounted to only 42 per cent of this minimum.

* J. and M. Kuczynski, Die Lage des deutschen Industriearbeiters.

According to Kuczynski, the purchasing power of the American worker in 1928 represented only 70 per cent of his purchasing power in the year 1899. The actual income of the worker in the year 1928 represented only a little more than half, namely, 56 per cent, of the minimum necessary for the healthy maintenance of a family. In this connection it must be remembered that the year 1928 was a year of "prosperity", a year in which the working class of America found itself in an unusually favorable position. The ratio has become much smaller in the crisis years 1930 and 1931. The changes which have taken place in the year 1929-30 in the material conditions of the working classes in the countries of capitalism and in the Soviet Union are clearly visualized by the following data: In the United States wages of industrial workers have decreased by at least 20 per cent, in Germany by 10 per cent. In the Soviet Union wages of industrial workers have increased by 30 per cent; of industrial and construction workers by 37 per cent.

In this way does the U. S. S. R. compare with the "mighty powers" of capitalism. There has been a rapid growth not only in the total amount of wages but also in the actual number of workers, due to the extensive construction work being carried on in the U. S. S. R. We should also bear in mind that in the above statistics the socialized part of wages was not taken into account. The American bourgeoisie spends 11 billion dollars, almost one-third of its income, upon unproductive expenditure, while social insurance is practically unknown in the United States. *

We have already indicated that in capitalist countries there can be observed a continual increase in the intensity of labor. At the same time, there is a continual decrease in the total amount of wages and in the individual earnings of workers. In the Soviet Union such a situation is naturally impossible. In capi-

* For the United States we have taken the data from the "Monthly Labor Review", 1931, No. 2. The decrease in wages is indicated only partially, since the statistics do not take into consideration the closing down of factories. For Germany we have taken the data from the "Reichsarbeitsblatt", 1931, No. 15, pp. IV-234 and from the "Amtliche Nachrichten für Reichsversicherung", 1930, No. 12.

talist countries we observe an analogous situation with reference to the working hours, the increase in which constitutes part of the decisive offensive of the capitalists upon the material conditions of the workers.

In Germany, for instance, over 54.7 per cent of the workers work more than 48 hours per week, over 13 per cent more than 54 hours per week. According to an investigation made by the German Association of Trade Unions in February, 1930, 75.6 per cent of the workers were working more than 48 hours per week.

In England the question of nullifying the eight-hour day for miners occupies the center of attention, although this law was established by the conservative Baldwin Government in 1926. According to official information, over 100,000 miners worked more than the established working time in 1930.

In the United States in 1927 the working hours in 25 industries, excluding mining, averaged 49.6 hours per week; in 1928 the average working week in the cotton textile industry was 53.4 hours. In 1926 the average working week in the woolen industry was 49.3 hours and in the steel industry 54.4 hours. The lengthening of the working day has been especially noticeable in recent months. The Monthly Labor Review of March, 1930 gives typical data regarding the duration of the working week in the oil industry of the southern states in 1930. Drillers worked from 48 to 80.3 hours a week, crane workers from 48 to 84 hours, mechanics and pump workers from 48 to 81.5 hours, stokers from 48 to 82.1 hours, laborers from 48 to 65 hours, drivers from 48 to 70 hours, toolmakers from 48 to 81.4 hours. From this it may be seen that capitalism does not limits its ruthless exploitation to the unskilled and unorganized workers.

Czechoslovakia was one of the countries which after the world war established an 8-hour day for industrial and agricultural workers, a law to that effect being adopted in 1921. However, after the law was enacted overtime hours continued. Overtime hours totalled 1,934,949 in 1927, 17,787,426 in 1928, 15,331,331 in 1929, and 16,277,873 in 1930.

We could cite further figures regarding Poland, Italy, France,

Switzerland, Estonia, Brazil, Australia, etc. However, we shall limit ourselves to the Fifteenth Conference of the International Labor Office in Geneva, which completed its sessions on June 18, 1931, and adopted proposals regarding working hours in the coal mines. These proposals limited the working time of underground workers in the coal mines to 7¾ hours a day. But, if we take into account all the "normal and extra overtime" permitted by these proposals, we must come to the conclusion that the International Labor Office has actually established for the coal miner a working-day which ranges from 8½ to 9 hours. These are facts representative of every-day conditions prevailing in the countries of "Organized" capitalism.

All these facts make it possible to compare the two forms of competition. On the one hand, there is the competition of the workers in the U. S. S. R., which has as its aim to attain the highest output, to improve the technique of production, to increase productivity, to draw new masses into the production process, to improve systematically the material and cultural welfare of the working class. On the other hand, there is the competition of the bourgeoisie in the capitalist countries directed toward the highest increase of personal gain, at the expense of systematically lowering the standard of living of the working class accompanied by rapacious exploitation of labor, excessive and extravagant waste, non-utilization of the latest achievements in technique, and limitation of the productive forces of labor.
It is not necessary to be especially farsighted in order to predict which of the two forms of competition will in the near future determine the direction and development of world economy.

GLOSSARY OF SOME SPECIAL TERMS USED

Census industry - All industrial establishments employing 15 workers or more and using mechanical power and all those where no mechanical power is used but employing at least 30 workers.

Contracting - System by which the individual peasants and the collective farms enter into agreements with state or cooperative organizations to sell a given quantity of their products. Advances in money, machinery, or supplies are extended on these contracts.

Control figures - The annual program for the entire national economy.

Counter-plan - Unofficial plan worked out by the workers in a factory, mill, mine, or on a state or collective farm on the basis of their intimate knowledge of the possibilities of their particular enterprise. Such a plan usually calls for higher schedules than those of the official plan (industrial-financial plan) assigned to the enterprise by the higher planning bodies.

Economic accounting (business basis) - One of the basic principles underlying the organization of Soviet industry. It aims at putting each unit in the industrial structure - from the "united industries" (see below) to the factory department or even the factory work bench - upon a strict accounting basis and to make each unit individually liable for its obligations and, as far as possible, financially self-supporting.

Industrial-financial plan - The annual plan (based on the Control Figures) assigned to the individual enterprise (factory, mill, mine, or farm) by the higher planning bodies. It includes definite schedules for all phases of activity of the enterprise - amount and quality of output, production costs, labor productivity, working and living conditions of workers, etc.

Machine-tractor station - A center supplying mechanical power and technical equipment to collective farms. It operates on the basis of agreements with the collective farms, whereby the station is obligated, in return for monetary payments

or a share of the crop, to perform with its tractors and machinery all the necessary work on the lands of the collective farms served by it, to give these farms the advisory services of its agronomical staff, and to make all necessary repairs in its shops.

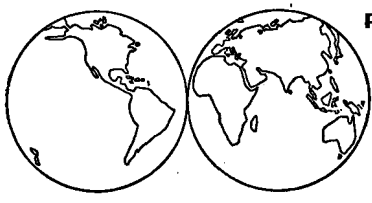
Shock brigades - Voluntary groups of workers who assume the initiative in setting the pace in their respective factories, mines, state or collective farms, etc. They also go, in case of need, to assist other enterprises or farms which are behind with their schedules.

Socialist competition - Friendly competition among branches of industry, individual enterprises, various departments of the same enterprise, or individual workers to increase the quantity or improve the quality of output, to reduce costs, or to exceed the plans for a given period in any respect.

State large-scale industry - All those industries in the Soviet Union which have been nationalized and placed under the direct supervision of the state (Supreme Economic Council or Commissariat for Internal Supply). It now embraces practically all (about 95 per cent) of large-scale industry.

United industries - The highest link (next to the two directing commissariats - the Supreme Economic Council and the Commissariat for Internal Supply) in the organization of Soviet state industry. Those united industries connected with supplying the country with food are under the supervision of the Commissariat for Internal Supply; all others are under the supervision of the Supreme Economic Council. A united industry regulates the work of all the trusts and enterprises in a certain branch of industry, and, in addition to its administrative functions, handles supplies (raw materials, fuel, equipment, etc.) marketing, and financing.

Workers' faculties - Special schools for preparing factory workers for the higher educational institutions.



PROGRAMME

OF THE

1 9 3 1

WORLD SOCIAL ECONOMIC CONGRESS

UNDER THE AUSPICES OF THE INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION (I. R. I.)
66 JAVASTRAAT - THE HAGUE - HOLLAND

PLACE: AMSTERDAM - HOLLAND

DATE: AUGUST 23 EVENING TO 29 MORNING

SUBJECT: SOCIAL ECONOMIC PLANNING
THE NECESSITY FOR PLANNED ADJUSTMENT OF PRODUCTIVE CAPACITY AND STANDARDS OF LIVING

PRESIDING OFFICER: C. H. VAN DER LEEUW
PRESIDENT INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION

MEETING PLACE: KOLONIAAL INSTITUUT
AMSTERDAM

SUNDAY

23

20.— OPENING MEETING. REPORT ON CONGRESS PROCEDURE, FOLLOWED BY INFORMAL RECEPTION.

MONDAY

24

I. THE PRESENT PARADOX—UNEMPLOYMENT IN THE MIDST OF ECONOMIC PROGRESS

9.— Address by Dr. F. Wibaut, Member of the Town Council of Amsterdam

9.15 1. THE SIGNIFICANCE OF WORLD-WIDE UNEMPLOYMENT

Speaker: Dr. Max Lazard, Paris

Interpretation of reports on fluctuations in employment and unemployment in various countries, 1910-1930 (Great Britain, France, Australia, U. S. A., Canada, U. S. S. R., China, Germany), printed and available in advance; by Dr. F. C. Benham, London School of Economics and Political Science, formerly lecturer in the University of Sydney, Australia; Dr. W. A. Berridge, Metropolitan Life Insurance Company, U.S.A., and member of Committee on Governmental Labor Statistics of the American Statistical Association; Dr. Susan M. Kingsbury and Dr. Mildred Fairchild, Bryn Mawr College, U.S.A.; L. K. Tao, Director, and S. H. Lin, Institute of Social Research, Peiping, China; and Dr. Robert Wilbrandt, Technische Hochschule, Dresden, Germany.

10.15 2. RECENT GROWTH IN THE WORLD'S PRODUCTIVE CAPACITY.

Speaker: Dr. Otto Neurath, Director, Social Economic Museum, Vienna

11.15 Intermission

11.30 Discussion: Dr. F. C. Benham, London School of Economics and Political Science (University of London); Dr. Robert Wilbrandt, Technische Hochschule, Dresden.

12.45 Adjournment

II. PRINCIPLES AND PRACTICABILITY OF ECONOMIC PLANNING

14.15 1. PRINCIPLES AND PRACTICE OF SCIENTIFIC MANAGEMENT: UNITED STATES

Speaker: Dr. H. S. Person, Managing Director of the Taylor Society, New York; formerly Director of the Amos Tuck School of Administration and Finance, Dartmouth College, U. S. A.

14.45 2. PRINCIPLES AND PRACTICE OF SCIENTIFIC MANAGEMENT: EUROPE

Speaker: Hugo von Haan, International Management Institute, Geneva

15.15 Discussion: Dr. Heinz Ludwig, Member of Board of Directors, Hermann Meyer & Co. A.G., Berlin; Edmond Landauer, Secrétaire Général du Comité International de l'Organisation Scientifique, Paris; Ing. Dr. Stan. Spacek, Ministry of Public Works, Tcechoslovakia; Wallace Clark, Consulting Engineer, New York and Paris; Henri Pauwels, Confédération des Syndicats Chrétiens de Belgique, Bruxelles.

16.15 Intermission

16.30 General Discussion

17.45 Adjournment

TUESDAY

25

9.— 3. THE PROBLEM OF PLANNED ECONOMY

Speaker: Dr. Lewis L. Lorwin, Institute of Economics of the Brookings Institution, Washington, D.C., U.S.A.

9.45 Discussion: Professor J. B. Tayler, M.Sc., Professor of Economics, Yenching University, Peiping, CHINA; Bertrand de Jouvenel, author of "l'Economic Dirigée", Paris; Gerald Barry, Editor, Week-End Review, London.

11.— Intermission

11.15 Continuation of Discussion: Dr. F. Meyer zu Schwabedissen, Partner Bertelsmann & Niemann, Bielefeld, GERMANY

11.40 General Discussion

12.45 Adjournment

III. EXPERIENCE IN NATIONAL ECONOMIC PLANNING:

A. AGRICULTURAL B. INDUSTRIAL

14.15 THE UNION OF SOVIET SOCIALIST REPUBLICS

Speakers: Valery V. Obolensky-Ossinsky, Economist, Member of the Institute for Economic Research of the State Planning Commission (Gosplan); Head of U. S. S. R. Delegation to 1927 World Economic Conference, Geneva

Assisted by: Solomon Ronin, Member of the Institute for Economic Research and Member of the State Planning Commission (Gosplan); Aron Gayster, Vice-President of the Agricultural Academy of the U. S. S. R. and Member of the State Planning Commission (Gosplan); Ivan Kraval, Director of the Labor Research Institute; Alexander Cohn, Director of the Institute for Foreign Trade

TUESDAY (cont'd)

16.— Intermission

16.15 General Discussion

17.45 Adjournment

20.— Continuation of General Discussion

WEDNESDAY

26

IV. NECESSITY AND MEANS FOR INTERNATIONAL ECONOMIC PLANNING

9.— 1. INTERNATIONAL PLANNING BY INDUSTRIES

Speaker: Professor M. Palyi, Economist of the Deutsche Bank und Disconto-Gesellschaft, and Professor at the Handelshochschule, Berlin

9.40 Discussion: Professor Ernest M. Patterson, President, American Academy of Political and Social Science, Philadelphia, U. S. A.; Hugh Quigley, Chief Statistical Officer of the Central Electricity Board, England

10.10 General Discussion

10.45 Intermission

11.— 2. MASS DISTRIBUTION AND HIGHER STANDARDS OF LIVING

Speaker: Edward A. Filene, Wm. Filene's Sons' Co., Boston, U. S. A.

11.30 Discussion: P. J. S. Serrarens, Secretary International Federation of Christian Trade Unions, Utrecht, Holland.

12.— General Discussion

13.15 Adjournment

Afternoon No session

THURSDAY

27

9.— 3. THE FUNCTIONING OF THE INTERNATIONAL FINANCIAL SYSTEM IN THE ECONOMIC WORLD

Speaker: Professor M. Palyi, Economist of the Deutsche Bank und Disconto-Gesellschaft, Berlin

10.— Discussion

11.— Intermission

11.15 General Discussion

12.45 Adjournment

14.15 4. ECONOMIC SERVICE OF THE LEAGUE OF NATIONS

Speaker: Professor Rudolf Broda, President, League for the Organization of Progress, Antioch College, Yellow Springs, Ohio

15.— 5. EXPERIENCE AND POTENTIALITIES IN INTERNATIONAL ECONOMIC TREATIES

Speaker: Professor Joseph P. Chamberlain, Columbia University, New York

15.45 Intermission

16.— Discussion: Dr. Max Lazard, Paris; Hans Mars, Consultant on Scientific Management and Rationalisation of the "Kammer für Arbeiter und Angestellte", Vienna

16.45 General Discussion

 17.45 Adjournment

FRIDAY
28

V. STANDARDS OF LIVING—THE RESULTANT OF PRODUCTIVE CAPACITY AND BUYING POWER

9.— 1. INTERNATIONAL AGREEMENT ON LABOR STANDARDS

Speaker: Albert Thomas, Director International Labor Organization, Geneva

10.— 2. THE ECONOMIC POLICY OF THE INTERNATIONAL LABOR MOVEMENT

Speaker: F. Naphtali, Director of Economic Research for Trade Unions, Member of National Economic Council, Berlin

10.45 Intermission

11.— Discussion: Dr. Frieda Wunderlich, Economist, Member of the "Preussischen Landtag", Editor of "Soziale Praxis", Berlin; Dr. M. G. Levenbach, Lecturer in Labor Law, University of Amsterdam.

12.45 Adjournment

VI. ROUND TABLE CONFERENCE ON THE WORKSHOP

Chairman: Prof. Dr. Goetz Briefs, Director of Institute for Industrial Sociology and Social Science, Technische Hochschule, Berlin

14.15 1. FIRST SESSION

Starting point of discussion—the Industrial Employment Code in process of formulation by a committee of the Taylor Society, New York. Discussion opened by Morris L. Cooke, consulting engineer, Member Power Commission of New York State; formerly Director of Public Works of the City of Philadelphia, U. S. A.

F R I D A Y (cont'd)

Paper read by title: Human Relations in the Electrical Industry in the United States and Canada by H. H. Broach, President, International Brotherhood of Electrical Workers, Washington D.C., U. S. A.

15.45 Intermission

16.— 2. SECOND SESSION

Subject: The Workshop as a Unit in Planning under Different National Systems

17.45 Adjournment

20.15 **VII. THE NECESSITY FOR WORLD SOCIAL ECONOMIC PLANNING**

Speaker: Mary van Kleeck, Director Industrial Studies, Russell Sage Foundation, New York; Vice-President I. R. I.; Chairman of Congress Programme Committee.

Reviewed
20.10.32

This Report has been printed by the firm of "De Eendracht", Schiedam, Holland, where the principle of cooperation between workers (including management) and customers is given practical effect. Capital is intended to serve Labour and its remuneration is limited to 6% or 7%. All further profit goes to the workers and to the customers, who possess 99% of the shares. The business has been established since 1897 and its affairs are conducted to the entire satisfaction of all concerned.

EMPLOYMENT AND UNEMPLOYMENT IN PRE-WAR AND SOVIET RUSSIA

REPORT SUBMITTED TO THE WORLD SOCIAL ECONOMIC CONGRESS AMSTERDAM AUGUST 23-29 1931

BY
SUSAN M. KINGSBURY PH.D.
AND
MILDRED FAIRCHILD PH.D.
BRYN MAWR COLLEGE, BRYN MAWR U.S.A.

ADVANCE PRINT TAKEN FROM FINAL CONGRESS PUBLICATIONS ISSUED BY THE INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION (I.R.I.), THE HAGUE, HOLLAND - OFFICE OF VICE-PRESIDENT IN U.S.A. ROOM 600, 130 EAST 22D ST. NEW YORK

X:92.58.N3
G2

CONTENTS.

Page

LIST OF TABLES 7

LIST OF CHARTS 9

PREFACE 11

FOREWORD 13

INTRODUCTION 15

CHAPTER I. POPULATION 21

CHAPTER II. EMPLOYMENT 23

CHAPTER III. UNEMPLOYMENT 35

CHAPTER IV. PRODUCTION 41

CHAPTER V. PRODUCTIVITY OF THE WORKER . . . 63

CHAPTER VI. WAGES 71

CHAPTER VII. STANDARDS OF LIVING 83

CHAPTER VIII. CONCLUSION 101

APPENDIX.

SOURCES OF DATA 105

INDEXES USED IN THE REPORT 115

PROGRAMME OF 1931 WORLD SOCIAL ECONOMIC CONGRESS 125

LIST OF TABLES.

		Page
I	Population, Pre-war Russia and U. S. S. R., 1914—1930	21
II	Number of Workers in Large Scale Industry, Pre-war Russia and U. S. S. R. Yearly Average in Thousands. Years 1913 and 1923/24—1929/30	28
III	Number of Employed Persons, Pre-war Russia and U.S.S.R. Yearly Average in Thousands. Years 1913 and 1922/23—1929/30	29
IV	Employment in Large Scale Industry, Pre-war Russia and U. S. S. R., Years 1910—1923	30
V	Average Number of Workers in Large Scale Industry, U. S. S. R., 1928/29—1929/30, monthly (without Junior Personnel)	32
VI	Unemployed on Live Register, U S. S. R. Years 1920/21—1929/30	39
VII	Gross Production of Large Scale and Large Scale Government Industry, Pre-war Russia and U. S. S. R. In Million Roubles, Producers' Prices of 1913. Years 1913 and 1923/24—1929/30	47
VIII	Gross Production of Large Scale Industry, Pre-war Russia and U.S.S.R. In Quantity. Years 1913 and 1924/25 to 1929/30	48
IX	Gross Production of Planned National Economy, U. S. S. R. In Million Roubles, Producers' Prices of 1926/27. Years 1925/26—1929/30	50
X	Production of Large Scale Industry, Pre-war Russia and U. S. S. R. In Quantity. Years 1913—1922/23	52
XI	Gross Production Large Scale Industry, U. S. S. R. In Thousand Roubles. At Average Wholesale Selling Prices of 1926/27, 1928/29—1929/30, by months....	54
XII	Gross Production of Agriculture, Pre-war Russia and U. S. S. R. In Million Roubles. Producers' Prices of 1913. Years 1913 and 1923/24—1929/30	56
XIII	Gross Production of Agriculture, Pre-war Russia and U. S. S. R. In Quantity. Years 1913 and 1923/24—1929/30 ..	57
XIV	Gross Production of Agriculture, U.S.S.R. In Million Roubles. Producers' Prices of 1926/27. Years 1925/26—1929/30.....	58
XV	Railway Operations, Pre-war Russia and U. S. S. R. Year 1913 and 1925—1931	59

LIST OF TABLES

Page

XVI Capacity of Power Plants, Pre-war Russia and U. S. S. R. In Thousand kw. Years 1913 and 1924/25—1929/30 60

XVII Output of Electric Current, Pre-war Russia and U. S. S. R. Years 1913 and 1924/25—1929/30 60

XVIII Gross Production of the National Economy of the Soviet Union. In Billion Roubles at Pre-war Prices. Years 1913—1920 and 1920/21—1928/29 61

XIX Average Yearly Production per Worker, U. S. S. R. In Roubles, Producers' Prices of 1913. Years 1923/24—1929/30 . 69

XX Average Monthly Real Wages in Large Scale Industry, Pre-war Russia and U. S. S. R. In Currency of Corresponding Year. Years 1913 and 1923/24—1928/29 77

XXI Average Monthly Real Wages in Large Scale Industry, Pre-war Russia and U. S. S. R. In Roubles. Years 1913 and 1923/24—1929/30 78

XXII Average Yearly Nominal Wages of Employed Persons for Principal Categories, U. S. S. R. In Roubles. Years 1922/24—1929/30 79

XXIII Average Yearly Real Wages of Employed Persons for Principal Categories, U.S.S.R. In Roubles. Years 1922/23—1929/30 . 80

XXIV Price Indexes, U. S. S. R. Years 1917—1930 81

XXV Production of Agriculture, Marketable Portion, Non-Village Markets, Pre-war Russia and U. S. S. R. In Million Roubles. Producers' Prices of 1913. Years 1913 and 1923/24—1929/30 . 91

XXVI Exports from and Imports into Russia and the Soviet Union, 1913—1930. At Current Prices of Each Year 92

XXVII Exports and Imports, Pre-war and Soviet Russia, 1910—1923. In Million Roubles 93

XXVIII Major Exports from Pre-war Russia and the U. S. S. R. Values at Current Prices. Years 1913 and 1928/29—1929/30 . 94

XXIX Russian and Soviet Imports by Commodity Groups, 1913, 1928/29 and 1929/30 95

XXX Export and Import, Pre-war and Soviet Russia, in Principal Groups, 1910—1917. In Million Roubles 96

XXXI Social Insurance, U. S. S. R. Currency, where given, for Corresponding Year. Years 1925/26—1929/30 97

LIST OF CHARTS

Page

XXXII Social Insurance Budget. Expenses U. S. S. R. In Currency of Corresponding Years. Years 1927/28—1929/30 98

XXXIII Housing Construction, U. S. S. R. Years 1927/28—1929/30 .. 99

XXXIV Construction of Workmen's Housing - Methods of Financing, U. S. S. R. In Million Roubles. Currency of Corresponding Years. Years 1924/25—1926/27 100

TABLES IN APPENDIX

I Price Indexes. Yearly Average. Years 1923/24—1926/27 .. 117

II Price Indexes. Yearly Average. Years 1925/26—1929/30 .. 117

LIST OF CHARTS

I Employed Persons, Pre-war Russia and U. S. S. R. (Agriculture, Transportation, Construction, Census and Non-Census Industries) 1913 and 1922/23 to 1929/30 25

II Unemployment on Live Register, U. S. S. R. 1921—1930 38

III Gross Production of Large Scale Industry, Pre-war Russia and U. S. S. R. (Coal, Oil, Leather, Chemical, Metal, Textile, Total.) (In Roubles. Prices of 1913.) 1913 and 1923/24 to 1929/30. Logarithmic Scale 45

IV Average Yearly Production per Worker, Pre-war Russia and U. S. S. R. (Chemical, Leather and Shoe, Cotton, Metal, Coal, Average for all. In Roubles. Prices of 1913.) 1913 and 1923/24—1929/30 67

V Average Monthly Real Wages, Pre-war Russia and U.S.S.R., Large Scale Industry (Metal, Coal, Oil, Leather, Chemical, Textile, Food, Average for all. In Roubles.) 1913 and 1923/24—1929/30 75

VI Standards of Living, Pre-war Russia and U. S. S. R. (Agriculture, Industry, Exports, Imports, Population, Wage). (In Prices of 1913.) 1913 and 1922/23—1929/30. Logarithmic Scale 89

VII Summary Chart, Pre-war Russia and U. S. S. R. (Gross Industrial Production, Population, Employment, Productivity of Worker, Unemployment, Yearly Wage) 1913 and 1920/31—1929/30. Logarithmic Scale 102

PREFACE.

This report on fluctuations in employment and unemployment in pre-war Russia and in the Soviet Union was prepared as one of the studies of several countries which constituted the firsthand data for comparative study of the present economic crisis at the 1931 World Social Economic Congress. The Congress was held at Amsterdam, Holland, the last week in August, under the auspices of the International Industrial Relations Association (I. R. I.) * The theme was Social Economic Planning - The Necessity for Planned Adjustment of Productive Capacity and Standards of Living. The other countries included in the preliminary statistical analyses of fluctuating employment were Australia, Canada, France, Germany, Great Britain and the United States, with notes on the industrial situation in China, where comparable statistics were not available. These countries were chosen not for their specific national interest, but as representative of regions of surplus, regions of unbalanced resources with more or less success in achieving balance, and regions entering upon industrialization. Russia was thought of as belonging in the last category.

The Soviet Union, however, is also the country of a new economic system, and this feature overshadows all others in a comparative study of this kind. Nevertheless the report on changes in employment was not conceived as a description of the new economic system in Russia. That was presented to the Congress by the Soviet delegation in a series of reports separately published, on the subject, Social Economic Planning in the Union of Soviet Socialist Republics. For their reports this is a companion volume.

The data presented by Dr. Kingsbury and Dr. Fairchild are nowhere else available in English. They have had to be translated from original sources and classified, with all the difficulties involved in changes in grouping of industries, as the system of reporting in Russia has naturally changed since

* Addres of Secretariat: Javastraat 66, The Hague, Holland.

the old regime; and also it has developed with the growth of the present system of planning. The authors are well qualified for this task, since during a nine month's stay in Russia they had opportunity for close contact with statistical material and with typical factories and workshops. The study was made at Bryn Mawr College, in the Carola Woerishoffer Graduate Department of Social Economy.

The comparative statistics of fluctuations in employment and unemployment during the last two decades, were coupled with world statistics of the growth of productive capacity during the same period. The discrepancy between productive capacity and present purchasing power constituted The Paradox—Unemployment in the Midst of Economic Progress, which was conceived to be a problem of economic organization. Social economic planning was analyzed at the Congress as a possible way out.

Widespread interest in planning, and particularly in the experience in national planning in the Soviet Union, has led to demand for as much of the Congress material as possible in advance of the full publications, which are expected early in 1932. In response to this interest, this report, which was available only in mimeographed form at the Congress, is now issued as an advance reprint. It will be included also in the final published volume.

New York, Januari 1932.

MARY VAN KLEECK.
Chairman, Program Committee,
1931 World Social Economic Congress.
Vice-President in the United States of the
International Industrial Relations Association.

FOREWORD BY THE AUTHORS.

In presenting this report the writers wish to acknowledge the assistance of all those whose cooperation and time have made possible its preparation. For the loan of material and advice in its use, we are indebted primarily to Amtorg, the American Russian Trading Organization, New York, to the Soviet Information Bureau, Washington, D.C., to the United States Department of State, to the Library of Congress, Washington, D.C., and to the New York Public Library. We wish particularly to express our appreciation to the Research and Information Division of Amtorg for their very great assistance and courtesy.

To Marthe Andrée Miskolczy who, as a graduate student at Bryn Mawr College in connection with a seminary in Industrial Organization given in the Carola Woerishoffer Graduate Department of Social Economy and Social Research, aided in gathering the data used in the report, particularly those on Pre-war Russia, we wish to express our obligation and gratitude. And to May Smitt, whose tireless energy in translation and secretarial assistance formed the foundation for the work, we are deeply indebted.

Bryn Mawr, July 1931.

EMPLOYMENT AND UNEMPLOYMENT IN PRE-WAR AND SOVIET RUSSIA.

INTRODUCTION.

Russia during the years covered by this report, from 1913 to 1930, has passed through war, revolution, civil war, foreign intervention and reconstruction. Realization of these facts is essential to any understanding of the statistics for the period. And study of the statistics at once reveals an economic cataclysm.

The results have been two-fold: in the first place, the break down of the old political and economic order and disorganization of the entire people; in the second place, reorganization and a new economical and political system. The statistics themselves reveal both the disorganization and the reconstruction.

Moreover, the nature of the reconstruction is forced upon the attention at every step as the statistics for the period are surveyed. The new political economy is a socialistic economy and a planned economy. As the years have advanced these two major characteristics have increased in fact and in importance.

Briefly, the history of Soviet Russia has brought about five basic economic changes. In the order of their occurrence they are: 1. the nationalization of all land; 2. the nationalization of all banks (and forms of credit); 3. the nationalization of the major part of industry; 4. the "socialization" of a large part of the trade; 5. the "collectivization" of, to-date, about one half of the agriculture.

We have, then, a picture of government control and direction encompassing a very large proportion of industrial production. Practically all of basic industry, including transportation and mining, is in the hands of the government. Eighty percent of large scale industry and sixty one percent of all industry were operated by government trusts and corporations at the beginning of the fiscal year 1929/30. The industry not yet under government control directly is primarily the "kustar" or small handicraft production, amounting to twenty three percent of the total industry of the country at the beginning of the fiscal year

1929/30.[1] The percent of industrial production under government control has increased unquestionably during the eighteen months since that date.

We have also a picture of government control over an increasing part of agricultural production. In the year 1929 four percent of the peasant households and twelve percent of the sown area of the Soviet Union were in collectivized farms.[2] During the year 1930, twenty percent of the gross agricultural production came from collectivized farms, and, it is expected, in 1931 to be thirty three percent, according to preliminary estimates. In addition, state farms operated directly by the government trusts in 1930 contributed 491 million roubles to a total agricultural production of fourteen billion (in prices of 1926/27) reported.[3]

Finally, we have a picture of the trade of the country passing rapidly, during the last two years especially, from private to cooperative and state control.

Of the total income of the Soviet Union, therefore, in 1927/28, 41.6 percent is reported from the government sector, 10.1 percent from the cooperative, and 48.3 percent from the private sector. In 1928/29 it was estimated that 42 percent came from the government, 11.3 percent from the cooperative and 46.7 percent from the private sectors. In 1929/30 it was expected that 61.7 percent of the total national income would come from government and cooperative sources.[4]

Government control of so large a proportion of the economic forces of the country has led directly to the second major characteristic - economic planning. Planning began in Soviet Russia in 1921 with the first plan for electrification initiated by Lenin in the midst of civil war and disorganization. It developed with the first general plan for industry as a whole prepared in 1924/25. It became famous throughout the world with the Five-Year Plan in 1928/29. It is understood that it has

[1] See Control Figures 1929/30, pp. 428-31 for basis of these percentages.

[2] Control Figures 1929/30, p. 555.

[3] Planned Economy, December 1930, pp. 359-63.

[4] Control Figures 1929/30, p. 34.

become an integral part of the Soviet economic policy, with additional five-year, ten-year and twenty five-year plans being prepared at the present time.

Accompanying the picture of socialist and planned economy is another one, equally important. It consists of: 1. the progressive abolition of individual competition in production and trade; 2. the progressive abolition of private profit from the means of production; 3. the levelling of standards of living for the whole population. In the economic life of the Russian people these things cannot be over-estimated.

A new form of competition, certainly, has grown up between trusts, factories, collective farms and various groups, that of "socialistic emulation". But it is psychological rather than economic in its effect, that is, its function is to serve as an incentive to work, rather than as an economic control. One form only of the old economic competition, by present indications, will remain to the Russian people, that between the Soviet Union and the capitalistic countries. And that, also, is, within the nation, psychological more than economic in its effect. Economically, within the nation, it is of doubtful significance. Private profit, both psychologically and economically is decreasing in importance. With comparatively insignificant exceptions also, a single standard of living prevails over the entire country. Certainly the city worker lives better than the peasant, the intellectual and the Administration expert live better than the manual worker. But this differential, in comparison with other countries, is so slight and, in many cases, is so offset by other privileges that it is, broadly speaking, negligible. Communist policy, also, would seem more likely to reduce than to increase it, if ever practical and immediate issues cease to require its retention.

In surveying the period of Soviet reconstruction it must be remembered of course, that Russia is a country of vast territory and, according to most estimates, of large resources, newly opened, newly industrialized, rapidly developing. Russia before the war was, apparently, industrializing and at an increasing rate. Moreover, the tendency was apparently toward large scale industry, coming from the states' "proprietary" factories, formerly leased,

and supplied with forced labor, and from the land owners' or "votchinal" factories mostly connected with the exploitation of natural resources upon the estates and in earlier years worked by serf labor. In 1913, according to one source, there were 17,877 enterprises belonging to different branches of industry, employing a total of 2,319,577 workmen, from which 894 enterprises, that is, five percent of the total, employed 54 percent of the total number of workers.[5]

The concentration was especially strong in the metal industry where 50 percent of all the pig iron production of the country was centered in the hands of five large concerns of the South. One syndicate, also, controlled 80-100 percent of the iron-working industry, another, 90 percent of the copper output. Coal and oil showed similar organization. Tobacco, matches, sugar, yeast and railway works were all in great syndicates and a state monopoly was formed shortly before the war which controlled all spirits. State protectionism favored trustification although heavy subventions in certain instances also apparently stultified efficient and progressive operation.

Nevertheless, on the eve of the war, Russia was primarily an agricultural country. Forty eight percent of her national income came from agriculture in 1913 and six percent from forestry and fishing. Only slightly more than 22 percent came from industry.[6]

Soviet Russia, therefore, since the country is rich in natural resources, has a vast new field to open and a new opportunity to industrialize. In these things she is at the present time probably the pioneer nation of the world. The points to consider in this regard are: 1. her growth, certainly; but also 2. her rate of growth; 3. her stability of growth, that is the continuity at least; and 4. the cost to the population in hours of work, standards of living and security.

These conditions must all be kept in mind as we consider the statistical material in hand. The purpose of this report, first and last, is to reveal the status of employment and unemploy-

[5] Voytinski, W. L.: Die Welt in Zahlen, Berlin, 1926, pp. 10-11.
[6] Previous citation, p. 12.

ment in Soviet Russia and to consider their causes and significance. In view of the peculiar circumstances, in Soviet Russia at least, the data in those fields will require those of other fields to support and elucidate them. They are incomplete without accompanying data on production, wages and standards of living.

The increase of employment and the decrease of unemployment, accompanying as it does, an increase in population, a small increase also in urban and, according to the Control Figures[7] in proletarian, i. e. workers' population, needs a study of the development of production and of the productivity of the worker to make clear the forces controlling employment possibilities. In Soviet Russia the processes of reconstruction after war and revolution, of industrialization in a long backward and primarily agricultural nation, of rationalization in organization and technique of manufacture, have all combined to force into one decade a meteoric rise which is phenomenal.

What we shall consider, therefore, is data on employment and unemployment, certainly, but also on population, production, the productivity of the worker, wages and standards of living. Sections on each subject will follow in the order given.

The statistical data available from Russian and Soviet sources are all for the years from 1913 to 1930. Because of the peculiar circumstances these years in the last two decades are the most important. The shortage of data between 1910-1913 is of secondary importance, although the difference in the nature and the rate of the development along various lines between pre-war and Soviet Russia would be interesting. To be attempted at all, however, it should cover a longer period, and the attempt in any event would hardly be germane to the purpose of this study.

The pre-war and pre-revolution material, aside from various secondary sources, used in most cases for reference only, comes from the reports of factory inspection under the Tsarist regime, published for the years 1914 to 1917 by the Soviet authorities after 1920. The data from Soviet Russia come from various official publications.

[7] Control Figures, 1929/30, p. 420.

The series which are given, therefore, in most cases are for the years 1913, and 1923/24 to 1929/30. The latter years represent the Soviet fiscal year during the period of reconstruction. Series for the years between 1913 and 1923/24 will be given in supplementary form. Altogether the completeness of the data available, if one seeks them diligently, is extraordinary.[8]

Attention is called especially to the two periods in which the work is divided. For the purposes of this study, the important one is that of the reconstruction. In order to make possible comparisons both with the present and with pre-war development, data in values are given in fixed prices both of 1926/27 and of 1913.[9]. It should also be stated that figures from the Control Figures of 1929/30 are for planned national industry only, and therefore in totals, at least, about twenty percent lower than if they covered the entire census industry. Allowance should be made for this when reading the tables.

The series show, all of them, comparable trends. Between the year 1913 and the year 1923/24 one finds a great drop. The actual drop from 1913 to the years of lowest ebb, 1919 and 1920, was still greater, according to all the available evidence. Industrial production was probably not more than 20 percent of the pre-war production. The year 1923-24 was a year well within the reconstruction period therefore. And between 1923/24 and 1929/30 one finds on the whole a steady and rapid ascent.

[8] See Appendix for full discussion of Sources used.

[9] See Appendix for discussion of the index numbers of prices used.

CHAPTER I. POPULATION.

Population figures are given solely for the purpose of comparison with employment and production figures.

The population of the Russian Empire before the war was estimated (by census in 1913) at 182 million. On January 1, 1914, the population of the present territory of Soviet Russia was 139.7 million. The present population is estimated to be over 161 million. The growth of population is shown in the following table: [10]

TABLE I. POPULATION.

Pre-war Russia and U.S.S.R., 1914-1930
(in millions.)

Compiled from the Control Figures 1929/30, pp. 420-21, supplemented by the Economic Handbook of the Soviet Union, American Russian Chamber of Commerce, 1931, p.l.

	Date	Urban	Rural	Total	Percent of 1914	Urban population (in % of total)
January 1,	1914	25.8	113.9	139.7	100.0	18.5
January 1,	1917	29.0	112.7	141.7	101.4	20.4
August 28,	1920	21.1	113.2	134.3	96.4	15.7
August 1,	1922	21.7	110.0	131.7	94.3	16.6
March 15,	1923	21.9	111.6	133.5	95.6	16.5
January 1,	1924	22.1	114.9	137.0	98.2	16.1
April 1,	1925	23.2	116.8	140.0	100.2	16.6
January 1,	1926	25.3	119.2	144.5	102.2	17.1
December 17,	1926[1]	26.7	120.2	147.9	105.3	17.9
April 1,	1928	27.9	123.4	151.3	108.3	18.4
April 1,	1929	29.3	125.5	154 8	110.8	18.7
April 1,	1930[2]	30.7	127.8	158.5	113.4	19.1

[1] According to the census of December 17, 1926.

[2] Approximately calculated.

The relation between urban and rural population is seen to be very nearly the same as in pre-war Russia. During the civil war years and reconstruction until 1928, the percent of city

[10] Statement from the Economic Handbook of the Soviet Union, American Russian Chamber of Commerce, 1931, p. 1.

population was somewhat lower than village or rural. Within the last year it is calculated as slightly higher.

The land area of the country totals 21,358,101 square kilometers (8,144,282 square miles), 4,582,351 square kilometers in Europe, 16,770,750 square kilometers in Asia.

CHAPTER II. EMPLOYMENT.

The data on Employment in Soviet Russia are presented in four series:

1. Workers in large scale industry (census industry) [11] 1913, 1923/24-1929/30, average yearly, in numbers and in percents to the previous years.
2. Total employment 1913, 1923/24-1929/30, average yearly.
3. Employment in large scale industry, 1910-1923, average yearly.
4. Workers in large scale industry, monthly, 1928/29-1929/30. (See accompanying Series, Tables II-V and Chart I.)

These various employment series show at once the striking characteristics of the two decades. According to series 1, for the year 1913, with, in round numbers, 2,550,000 workers employed in large scale industry, to the year 1923/24, with less than 1,620,000 workers, the total industrial employment dropped thirty five percent. Not all branches of industry show the same percentage of decrease. The coal series shows a drop of 2.4 percent, oil 19.5 percent, metal 32.6 percent. Textiles 41 percent, the food industries 59.6 percent and sugar alone 74.5 percent. The series for Shoes, Linen and Electrical manufacture show an increase in employment, the last 203 percent. From 1923/24 to 1929/30, series 1, 2 and 4 all show an almost consistent increase, ranging from five to almost 30 percent a year. By 1928/29 total employment in Census Industry had risen from 1,800,000 persons in 1923/24 to 3,270,000, 17 percent above the 1913 level. In all employment, series 2 shows that it rose to over 12 million in 1928/29, 13 million in 1929/30. [12] (See Tables II, III and V.)

The rise, however, it will be noticed is for the totals and for certain categories. A good bit of variation occurs in other categories, evidence of shifting employment (See Series 1.)

[11] Census industry includes all industrial establishments employing 15 workers or more and using mechanical power, and all those employing at least 30 workers where no mechanical power is used.

[12] The word "workers" as used applies to manual workers, it is understood, in Russian terminology; the word employees includes both manual and clerical assistants.

Primary among these are: a) a drop in oil employment in the last five years, a drop in paper and in salt; b) a sporadic rise and fall in employment in the metal, woodworking, chemical and food industries; c) a rise has been evident in the last five years in coal, from 1 to 6 percent a year, since 1923/24 in cement, from 3 to 75 percent a year, in glass manufacture, with the exception of the last year, and in textile, especially in cotton. The electrotechnical employment has increased consistently throughout the period, altogether nearly 500 percent. In salt, food and paper, and in wood-working and metal, until recently, when in metal especially a rapid rise seems apparent, a rise of 50 percent in 1929/30, the numbers have been consistently lower than in 1913. For five years in coal and glass and, throughout, in linen, leather and shoe, and in electrotechnical employment, the numbers have been consistently higher than in 1913.

The shifts represent changes in types and methods of manufacture. A study of series 2 shows similar tendencies: a great increase in the numbers employed, including both manual and clerical workers in census or large scale industry, in construction, transportation, especially railroad transportation, communication and commerce; a decided decrease in those employed in small scale industry and in agriculture.[13]

Series 3 shows something of the history of the great decrease during the war, revolution and civil war period. The year 1920 was the low mark, apparently, with employment slightly over fifty percent of the 1913 level. The year 1923/24 was therefore the second or third year of reorganization. The relation to population is significant. Large scale industrial employment increased 17 percent in 1928/29 above 1913; population increased 13 percent, and urban population 16 percent.

[13] Since the drop in agricultural hired workers came entirely between 1913 and 1923/24, it represents to-date, probably, the change in proprietorship, i.e. right to the use of the land which came to the peasants in the October revolution.

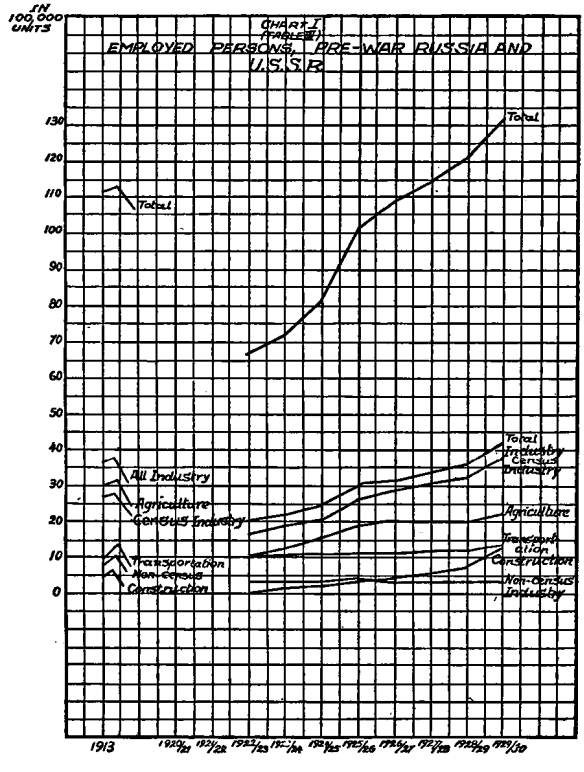

(CHART I TABLE II)
EMPLOYED PERSONS, PRE-WAR RUSSIA AND U.S.S.R.
IN 100,000 UNITS
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Total
Total
All Industry
Agriculture
Census Industry
Transportation
Non-census
Construction
Total
Industry
Census
Industry
Agriculture
Transport
ation
Construction
Non-Census
Industry
1913
1920/21
1921/22
1922/23
1923/24
1924/25
1925/26
1926/27
1927/28
1928/29
1929/30

TABLE II. EMPLOYMENT SERIES, 1.

NUMBER OF WORKERS IN LARGE SCALE INDUSTRY.

Pre-war Russia and U.S.S.R.
Yearly Average in Thousands.

Years 1913 and 1923/24 to 1925/26 compiled from Control Figures 1926/27 p.p. 379-81; year 1926/27 compiled from Control Figures 1927/28, p. 501; years 1927/28 to 1929/30 compiled from Control Figures 1929 30, p. 504.
Average for 1929/30 compiled from Monthly Statistical Bulletin, July 1930, p p. 2-5.

	Census Industry					Planned National Economy				
	1913	1923/ 1924	1924/ 1925	1925/ 1926	1926/ 1927	1927/[2] 1928	1928/ 1929	1929 1930 Plan	Aver- age 11 months 1929/30	% [3] 1928/29 to 1913
Coal	193.0	188.3	159.8	214.2	217.8	223.5	237.7	243.7	238.8	123.0
Oil	44.3	35.7	39.2	39.0	44.3	43.6	41.2	40.8	32.0	93.0
Peat	31.3	26.6	20.2	23.8	—	52.6	58.0	70.0	—	185.1
Mining of Ore	—	—	13.6[1]	19.6[1]	28.6	30.1	44.5	52.6	77.0	—
Metal	534.6	350.9	431.8	482.2[1]	523.3	443.2	486.9	530.0	739.3	91.1
Electrical Mfg.	7.0	14.2	18.4	25.0	27.2	29.3	34.2	43.5	52.7	489.0
Building Materials	—	—	—	—	—	127.3	143.2	169.8	—	—
Cement	—	7.0	9.8	17.6[1]	19.7	21.0	22.1	27.0	24.8	—
Glass	55.2	34.7	44.9	52.0[1]	57.0	64.5	66.6	67.7	63.5	120.8
Others	—	—	—	—	—	41.8	54.5	75.1	—	—
Lumber & Woodworking	104.0	66.2	69.3	83.9	82.4	70.6	83.1	101.1	100.6	80.0
Chemical (A + B)	70.8	59.7	53.6[1]	64.3[1]	61.4	70.7	79.9	86.7	100.5	113.0
Rubber	14.4	9.8	15.0	19.9	19.4	20.1	23.5	26.3	29.3	163.2
Match	20.1	12.2	13.8	16.4	13.3	(matches in Others)			22.0	—
Others	36.3	37.7	42.7	50.0	28.7	50.6	56.4	60.4	—	155.1
Textile	704.9	415.9	535.8	670.8	669.5	695.9	700.3	681.7	623.1	99.5
Cotton	480.4	265.1	378.4	487.4	471.8	521.3	525.4	499.4	431.0	109.3
Wool	92.1	60.6	64.9	70.4	61.4	58.7	59.2	62.1	61.8	64.3
Linen	67.9	70.2	70.4	84.9	95.7	81.0	79.4	81.3	93.8	117.0
Others	64.5	20.0	22.1	28.1	40.6	34.9	36.3	38.9	36.6	56.4
Machine sewn Goods (Clothing)	—	—	—	—	—	42.0	57.2	67.4	65.8	—
Leather and Shoe	29.3	42.7	37.0[1]	43.5[1]	46.1	61.6	81.1	88.5	104.8	276.1
Paper	39.9	27.2	34.3	30.4[1]	30.2	27.6	28.5	28.6	30.5	71.4
China & Porcelaine	100.9	26.5	17.7[1]	20.5[1]	21.6	22.5	22.6	22.4	23.7	70.8
Food	304.5	115.8	135.7	166.9	—	116.9	114.0	105.4	71.1	37.4
Sugar	154.8	37.8	37.0	39.2	36.7	46.0	43.6	36.7	10.6	28.2
Others	149.7	78.0	98.7	127.7	—	70.9	70.4	68.7	—	45.1
Salt	21.9	6.0	5.9	7.0	6.2	4.9	4.8	4.7	6.7	21.9
Others	311.0	200.1	266.5	461.1	707.2	69.7	81.2	92.9	162.1	—
TOTAL Workers	2552.0	1617.5	1893.5	2421.8	2579.2	2132.0	2298.4	2429.8	2517.0	—
TOTAL Employees (census Industry throughout)	2776.0	1816.0	2105.0	2678.0	2839.0	3033.0	3270.0	3456.0		117.8

[1] Figures taken from Control Figures 1927/28.
[2] Figures hereafter are for Planned National Economy only. See Appendix for explanation.
[3] Since figures for 1928/29 are for Planned National Economy only and figures for 1913 are for Large Scale Industry, these percentages probably represent a minimum.

TABLE III. EMPLOYMENT SERIES 2.

NUMBER OF EMPLOYED PERSONS.

Pre-war Russia and U.S.S.R.
Yearly Average in Thousands.

Years 1913 and 1922/23 to 1924/25 compiled from Control Figures 1926/27, p.p. 254-5 and 376-7; years 1925/26 to 1928/29 compiled from Control Figures 1929/30, pp. 487-9; year 1929/30 compiled from Planned Economy, October-November, p. 43.

	1913	1922/ 1923	1923/ 1924	1924/ 1925	1925/ 1926	1926/ 1927	1927/ 1928	1928/ 1929	1929/ 1930
Industry	3636	2043	2200	2489	3105	3261	3441	3678	4243
Census or Large Scale	2776	1659	1816	2105	2678	2839	3033	3270	3835
Non-Census or Small Scale	860	384	384	384	427	422	408	408	408
Construction	500	137	202	280	426	547	684	818	1321
Transportation	975	1093	1104	1139	1192	1257	1255	1270	1440
Railroad		862	875	896	914	961	957	951	1026
Water		120	99	103	99	111	110	113	130
Local		111	130	140	179	185	188	206	284
Communication	72	92	87	90	94	95	95	95	102
Credit and Commerce	510	306	380	490	615	669	679	777	916
Agriculture	3000	1100	1300	1500	2052	2124	2086	2138	2322[1]
Total of listed Items	8693	4771	5273	5988	7482	7953	8240	8776	10344
Others		1865	2057	2268	2734	3037	3216	3374	2949
TOTAL Employed	11200[2]	6736[3]	7330	8256	10218	10990	11456	12150	13293[1]

[1] Planned figure. See Control Figures 1929/30.
[2] Estimated.
[3] Discrepancy in total (probably typographical error).

TABLE IV. EMPLOYMENT SERIES 3.

EMPLOYMENT IN LARGE SCALE INDUSTRY. PRE-WAR RUSSIA AND U. S. S. R. 1910-1923.

Industry	1910	1911	1912	1913	1914	1915
Total large scale industry				2,319,577	1,960,868	1,922,5
Mineral			130,060	215,560	174,138	114,9
Mining including			388,266			
Coal „			156,701			
Donetz mines	110,000	132,000	141,000	168,000	186,000	181,0
Oil			34,109	37,459	38,285	39,4
Peat			31,200			
Salt			18,731			
Iron ore						
Metal			339,110	385,621	346,989	416,7
Wood Working			78,202	136,110	106,273	79,3
Chemical incl.			50,092	90,463	76,767	70,2
Rubber	15,012		9,159	22,766	25,350	26,5
Matches			18,260			
Alimentary incl.			236,703	369,001	330,879	319,6
Sugar			113,568	178,350	158,588	162,3
Tobacco			21,265			
Animal products incl.			40,330	55,736	50.450	61,2
Leather & Fur			16,112			
Shoe			11,701			
Cotton			429,612	566,137	485,563	479,3
Wool			79,494	66,557	93,931	86,9
Silk			33,417	34,697	31,297	27,4
Linen			58,653			
Hemp, jute, etc.			15,383	104,544	96,892	103,2
Other textile			5,960	46,323	29,126	33,6
Clothing						
Paper & printing			32,943	107,744	92,172	82,5
Power and non classified				7,605	8,098	7,8
Metallurgy				299,778	295,797	343,8

Certain figures are erratic because they come from the years 1917-21, years of confusion. Due to progressive registration from the center to distant regions statistical error is involved because newly registered enterprises are continually added to the annual total. In the year 1920 in some of the "Glavkies" all plants were counted as working even though they worked actually only a few days.

Up to 1916 only factories under factory-inspection furnished figures, which

Compiled from:

Publications of Central Statistical Department, Moscow:
Statistical Handbook U. S. S. R. 1928 (Moscow 1929)
" " 1913-17 (" 1921)
" Yearbook 1918-20; 1921; 1924.
Soviet Union Trade Delegation. Berlin: Encyclopedia of Russian Exports. Berlin 1925.
Osteuropa Institut, Breslau: dr S. Köhler, Die Russische Arbeiterschaft von 1905-1917, Berlin 1921.
S. S. Zagorsky, State Control of Industry in Russia during the War, New Haven 1921.

916	1917	1918	1919	1920	1921	1922	1923
93,862		2,012,000	1,335,000	1,223,000	1,306.657	1,125,022	1,292,226
01,638				50,372	49,357	44,508	58,882
				324,393	303,129	282,358	336,347
				159,536	170,159	130,646	169,885
35,000	280,000	157,000	68,000	116,000	117,000		
41,327				33,876	21,164	28,488	38,488
37,358	43,481	49,000	57,865	99,580	25,036	44,572	21,447
				13,156	13,596	5,336	6,726
				79,254	56,732	65,901	83,294
46,117		181,258	60,290	228,163	248,895	175,012	175,314
87,780				35,612	45,013	42,098	49,229
92,679		27,086	29,813	35,554	38,958	36,472	45,009
23,663	28,653	20,664	6,529	6,112	7,913	9,187	11,911
		9,041	11,835	10,852	11,071	9,421	10,400
38,591		42,142	70,484	260,196	172,534	103,468	112,914
		46,189	34,200	189,720	14,150	34,355	29,410
		15,841		27,201	20,530	18,950	19,200
70,168		17,862	8,516	111,527	88,994	43,659	46,620
		10,666	6,296	54,050	50,905	29,246	31,832
		6,502		53,745	35,598	11,959	11,299
58,758		271,466	135,000	134,078	85,434	179,838	216,644
87,714		23,675	50,150	42,975	49,499	42,396	53,990
26,731		1,278	5,650	3,110	4,521	3,296	3,649
		29,927	60,071	46,651	20,208	40,128	60,231
08,833		3,746	6,000	4,676	9,371	8,709	9,681
42,023			5,800	2,790	4,075	4,214	2,127
		10,987			77,283	36 677	34,020
80,514		22,894	18.982	22,593	68,098	55,814	63,764
10,989		5,453		28,823	23,974	20,393	21,817
27,502	452,374	113,0 1	54.038	61,029			

means that these data cover the privately owned large-scale industry, with the exception of a good part of the mines.

Shoe industry was in 1918 and 1920-23 taken out of the "clothing" in which the newer sources include it. During same years small scale leather industry was included with large scale.

Zagorsky and others frequently use these figures stating that they include State and private industry, 1914-17 exclude Poland.

TABLE V. EMPLOYMENT SERIES 4.

AVERAGE NUMBER OF WORKERS IN LAR

(without ju

Compiled from the Monthly Statisti

Number of work

	Years	October	November	December	January	Februa
1. Coal	1928/29	231,657	230,503	231,771	231,109	226,
	1929/30	236,266	245,271	251,169	254,687	254,
2. Naphtha	1928/29	31,421	31,173	30,839	30,716	30,
	1929/30	30,502	30,479	30,704	30,816	31,
3. Ore	1928 29	55,178	55,927	57,509	61,627	62,
	1929/30	71,791	72,866	72,173	76,632	77,
4. Salt	1928/29	5,633	4,718	4,202	4,186	4,
	1929/30	7,187	6,199	5,293	5,123	5,
5. Silicate	1928 29	111,144	112,099	112,348	112,730	113,
	1929 30	118,350	122,825	123,-06	124,239	126,
6. Metal	1928/29	565,287	566,016	570,624	578,770	585,
	1929/30	637,649	645,304	661,101	678,250	711,
7. Electrotechnical	1928/29	33,434	33,687	33,785	34,076	34,
	1929/30	39,026	40,992	42,947	44,916	48,
8. Textile	1928/29	676,125	675,375	677,351	676,948	672,
	1929/30	626,137	625,458	629,317	628,662	637,
9. Mfg. of Clothing	1928/29	67,471	67,897	68,063	68,333	68,
	1929/30	75,323	77,871	79,573	86,341	91,
10. Leather	1928/29	64,211	66,069	67,785	70,423	72,
	1929/30	87,372	89,451	93,200	96,702	101,
11. Chemical	1928/29	76,947	77,843	78,359	79,857	80,
	1929 30	88,740	90,174	92,097	95,168	98,
12. Alimentary (non stop production)	1928 29	56,202	56,339	56,741	56,095	55,
	1929/30	49,374	48,863	47,555	47,500	47,
13. Wood Working	1928/29	68,258	62,322	65,038	70,175	73,
	1929/30	86,931	82,935	87,447	96,522	100,
14. Polygraphic	1928/29	26,591	26,378	26,379	26,564	26,
	1929/30	28,964	29,371	30,061	30,587	31,
15. Paper	1928/29	27,571	27,448	27,752	27,923	28,
	1929/30	30,374	29,565	29,421	29,093	30,
16. Seasonal Alimentary Production	1928/29	19,122	33,036	36,348	38,601	39,
	1929/30	13,099	31,266	35,480	35,703	34,
TOTAL WORKERS	1928/29	2,178,249	2,188,129	2,208,500	2,232,671	2,239,
	1929/30	2,307,624	2,344,419	2,382,850	2,435,359	2,501,

ALE INDUSTRY, U. S. S. R., 1928/29—1929/30

rsonnel)
lletin, July 1930, 10, No. 85. p.p. 2-5.
ed at end of month.

March	April	May	June	July	August	September	Year Average number listed at end of months
223,315	214,982	216,081	214,868	212,645	209,011	224,862	222,259
256,934	253,649	249,107	235,765	202,267	187,440	—	—
29,944	29,762	29,643	29,619	29,678	29,821	29,929	30,254
31,950	32,241	32,509	33,404	33,896	33,969	—	—
60,344	56,477	62,489	68,467	64,375	68,645	72,644	62,175
80,740	80,553	84,470	85,269	75,965	69,747	—	—
4,695	5,720	7,011	8,412	9,036	9,336	9,583	6,411
5,274	5,881	6,697	8,803	8,998	8,903	—	—
111,748	111,088	109,284	111,161	110,181	114,741	116,251	112,160
127,698	129,520	130,408	132,559	129,204	130,029	—	—
586,435	589,474	598,897	609,164	617,187	625,478	634,086	593,886
735,763	758,791	788,143	818,432	842,137	855,439	—	—
34,083	34,018	34,478	34,876	35,565	36,508	37,617	34,705
53,450	56,494	58,806	61,412	64,184	68,847	—	—
661,728	648,158	645,599	643,223	638,666	634,468	633,870	656,973
644,012	636,411	615,714	606,848	601,537	603,309	—	—
69,153	69,308	70,708	71,131	72,155	73,990	74,960	70,150
95,944	101,566	102,596	105,530	105,231	113,494	—	—
73,697	76,470	81,283	83,552	85,294	85,833	85,467	76,018
106,616	109,188	114,061	115,462	118,214	121,596	—	—
80,908	81,198	83,389	85,014	85,890	85,921	86,983	81,879
100,498	103,107	106,531	108,250	109,501	112,364	—	—
53,826	52,116	51,799	50,876	52,064	51,942	50,988	53,712
47,759	47,611	50,358	52,349	53,849	53,649	—	—
74,395	66,855	61,733	81,075	89,874	92,906	91,722	74,843
105,932	101,484	97,935	112,928	117,133	117,059	—	—
26,682	26,266	26,781	28,109	28,848	28,993	29,018	27,271
31,833	32,062	32,984	33,373	34,341	34,766	—	—
28,306	28,516	28,136	29,240	30,235	30,256	30,080	28,646
30,624	29,861	31,059	32,010	31,902	31,814	—	—
39,124	38,774	34,954	19,131	9,475	7,487	8,301	28,382
30,866	20,671	12,230	8,600	7,706	6,224	—	—
2,226,779	2,199,607	2,215,409	2,245,613	2,255,607	2,263,223	2,294,445	2,230,362
2,575,572	2,585,025	2,604,846	2,655,770	2,638,969	2,655,436	—	—

CHAPTER III. UNEMPLOYMENT.

Data on unemployment in Soviet Russia seem to have been collected and recorded at the Employment Exchange throughout the country between the years 1921 and 1930 at least. It was not readily available in Russian publications, however, in detail and consistently, certainly not in those which were accessible to the writers at the time of this report. Figures have been taken therefore from articles and from the Statistics of Unemployment published monthly in the International Labour Review. The figures given came from the Soviet Employment Exchanges and they tally very well with those figures which are given in the Control Figures of the Central Statistical Administration of Gosplan for the years 1923/24 to 1926/27. The series given cover the years from 1921 (July) to 1930. Data for pre-war and war years are lacking, or were not found, at least.

A study of Table VI and Chart II reveals an extraordinary situation. During the years of civil war and "war communism" unemployment, according to the International Labour Office, was practically non-existent. The record in July of 1921 at the outset of the New Economic Policy is extremely low, 150,000 persons. From then on, with seasonal variation and with some fluctuation, upwards in the year 1923/24 to 1,344,000, downward in the year 1924/25 to 901,000, a rise in the number of unemployed is recorded, till April of 1929 when they reach their high-mark at 1,772,500 persons. Between April of 1929 and July of 1930, with again seasonal variation, the drop is striking. By July of 1930 the record shows 633,400 only unemployed.

Some discussion of the nature of the figures is essential. According to the Russian statement, the unemployed registered in the labor exchanges include both persons with a work record, out of a job and seeking work, and also young persons and peasants who are seeking work for the first time. A discussion of the problem in the Control Figures prepared during the autumn of 1929 is worth quotation:

"The past year 1928/29 is characterized by a noticeable break in the development of unemployment; conjuncture figures during 9 months show that: the number of so-called unemployed proper, i. e. persons who were

hired until the condition of unemployment began, has grown during 9 months by 1.7 percent, instead of by 42 percent during the same period last year. The persons who offer their work for the first time, increase their number during 9 months of this year by 26 percent, instead of by 43 percent, as during the corresponding period of last year. The whole registered mass of unemployed increases by 14.5 percent in comparison with last year, but the unemployed proper increase only by 8.4 percent. Taking into account the lowering in the rate of growth which usually takes place in the last quarter of the fiscal year, we may assume that the average yearly number of unemployed will increase by 10 percent, instead of by 11.6 percent, as had been planned in the Control Figures of 1928/29.

The statistics indicated refer to figures furnished by the Employment Agencies. According to the Trade Unions' figures, we have still more favorable data. According to the figures of the Central Council of Trade Unions, the number of unemployed members of the Union remains stable during the course of the year (April 1, 1928—April 1, 1929).

The growth of unemployment takes place mainly through persons who for the first time are looking for work, and who make up the principal group. If from the total mass of unemployed one were to deduct the group of persons looking for work for the first time, then in June of the current year we would obtain an absolute decrease of unemployment in comparison with June of last year by 78 thousand persons."[14]

The discussion continues with a statement that the problem of unemployment is primarily a problem of organization. With a better development of the activities of the Commissariat of Labor and of the Trade Unions in retraining and transferring workers to districts where labor shortage occurs, the number of unemployed in the Soviet Union would be lowered. It calls attention to the new labor demand expected in 1929/30, and suggests a better developed "planned system for hiring workers". In other words, a large percentage of the persons listed as unemployed belongs to the group of new workers, young persons, and also peasants who seek industrial employment for the first time. Moreover the demand for workers is sufficient, so that with proper organization, training and placement, the figures should be greatly reduced.

The figures for the year 1929/30 are evidence apparently of the more effective "planned system". In July of 1930 they had dropped to 633,000. The Commissariat of Labor declared there was no further unemployment in the Soviet Union, except those new and unskilled workers who could readily be placed by training

[14] Control Figures, 1929/30, p. 239-240.

and adaptation. It announced that the funds hitherto used for unemployment insurance would be used to better advantage by augmenting the efforts of the Trade Unions, the Commissariat of Labor and the Supreme Council of National Economy in training workers and young persons, and in transferring them to districts where they were needed. Unemployment insurance in Soviet Russia has yielded to training and rehabilitation. But that has occurred only after the number of persons registered as unemployed had dropped to such low figures that it could be handled by such methods, and the demand for new workers made training and rehabilitation both practical and imperative. The contention of Soviet Russia that unemployment is a phenomenon belonging to capitalist economy is born out by the relationship between her own problem, and the rise and fall of the New Economic Policy between 1921 and 1928. The final "liquidation of Nep", as it was called, and the development of planned economy has coincided very closely with the "liquidation of unemployment", and that in the year of world depression 1929/30. That the Employment Exchanges are still filled in Soviet Russia seems highly probable. That they are filled with people, able to work, looking for work, and unable to find it, if they will take the opportunities offered for training and transfer, seems highly improbable.

CHART II
(TABLE XI)

UNEMPLOYMENT ON LIVE REGISTER U.S.S.R. 1921 - 1930.

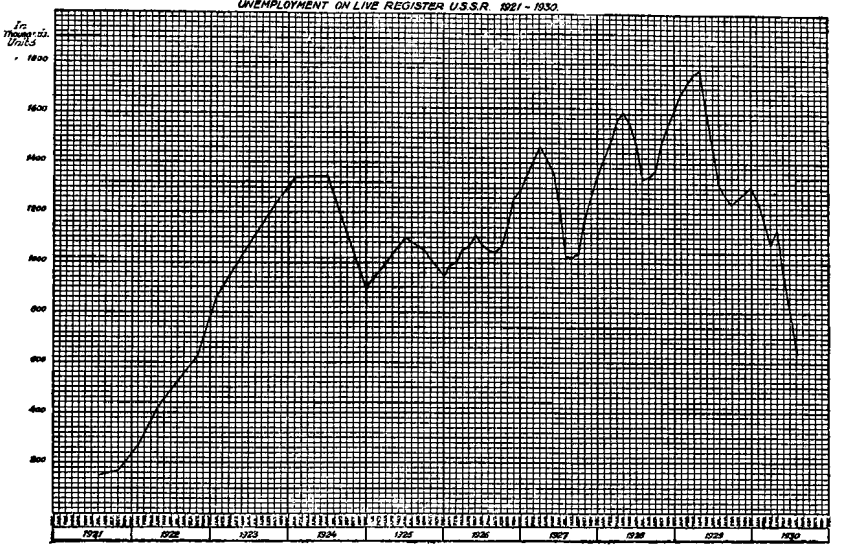


TABLE VI.

UNEMPLOYED ON LIVE REGISTER, U.S.S.R.

(in thousands)

Compiled from the International Labor Review November 1926-January 1930, Statistics on Employment [1]

		1920/21	1921/22	1922/23	1923/24	1924/25	1925/26	1926/27	1927/28	1928/29	1929/30
1st quarter	October [2]		175.2	625.0	1240.0			1163.4	1171.1	1475.0	1259.8
	November							1254.3	1264.0	1541.0	1284.7
	December					901.6	951.2	1289.6	1352.8	1616.0	1310.8
2nd quarter	January		266.4	865.1	1340.0		988.0	1350.4		1666.5	1254.8
	February						1005.6	1407.0	1482.8	1717.2	1168.5
	March						1056.4	1477.9	1576.4	1755.5	1080.9
3rd quarter	April		436.0	1000.0			1070.9	1419.9	1598.7	1772.5	1125.6
	May						1114.2	1363.4	1571.1	1590.0	936.6
	June				1344.3	1100.0	1065.5	1216.9	1471.3	1448.0	785.7
4th quarter	July	150.0	533.6	1115.0			1030.1	1037.5	1339.8	1310.6	633.4
	August						1023.7	1025.0	1344.0	1264.0	
	September					1055.0	1071.0	1041.2	1364.6	1241.6	
Average		150.0	352.8	901.3	1308.1	1018.8	1037.6	1253.9	1442.8	1535.1	1084.1

[1] Figures were published quarterly to December 1925 thereafter monthly. Data for years 1924 and 1925 erratic.

[2] Fiscal year of Soviet Russia was from October to October 1920/21-1929/30.

CHAPTER IV. PRODUCTION.

When one comes to study production, especially industrial production, one finds the heart of the whole subject of employment in pre-war and Soviet Russia. The historical situation alone, that is the war, disorganization and reconstruction, might be expected to bring about a fall and rapid rise in all productive works. A new impetus toward industrialization arising in part from the lack of industrial development, earlier, adds to the rate of increase. The development in the industrial world of new techniques and new applications of power, commonly in Europe called rationalization, and their adaptation into a newly industrialized country along with the industrializing process itself increases that rate still more. Conceivably, these things might all contribute to a great rise in a nation's productive power without socialism or a new economic organization. Nowhere have they done so and practically, in themselves, they do not give any reason for the conjuncture at one time. A new impetus toward industrialization arising out of the political needs of the Soviet government is necessary to add to that list.

Three series of data regarding industrial production are offered. [15]

1. Large scale industry, main categories, 1913, 1923/24—1929/30.
   a) in pre-war prices;
   b) in quantities.
2. Planned Industry, 1925/26—1929/30. [16]
   a) in prices of 1926/27.
3. Large scale production main categories 1913-1923, in volume and percent of change.
4. Large scale production, main categories, monthly 1928/29—1929/30, in prices of 1926/27.

Two series of data regarding agricultural production are offered:

1. Agricultural production, principal categories, 1913, 1923/24 to 1929/30.

[15] In view of the disagreement as to Russian sources, the reader is asked particularly to refer to the discussion of sources in the Appendix.
[16] See Appendix for discussion of "large scale" and "planned industry".

EMPLOYMENT AND UNEMPLOYMENT

a) in pre-war prices
b) in quantities.

2. Agricutural production, principal categories 1925/26—1929/30.
a) in prices of 1926/27.
(See accompanying Series Tables VII-XVIII and Chart III.)

The drop which has been described earlier between 1913 and 1923/24 levels of production is apparent in both industry and agriculture. In industry, in 1923/24, total large scale production amounts to little more than 50 percent of 1913 levels, in agriculture to 65 percent. (See Production Series 1a and Agriculture Series 1a) And in both cases the year 1923/24 is well within the reconstruction period. The production level of 1920 was nearer 20 percent of the 1913 level in industry, and of 1921/22, the famine year, was 50 percent of the 1913 level in agriculture. (See Tables X and XVIII.)

The rise of large scale industrial production between 1923/24 and 1929/30, however, as seen in the foregoing figures is extraordinary. It amounts, on the average, to over 25 percent per year and, for the period, to 372 percent as reckoned in pre-war prices. The only exceptions to the uninterrupted advance are in the series for textile manufacture and woodworking in 1929/30. A poor cotton crop the preceding year is given as part explanation for the textile failure. The woodworking drop was according to plan and represents a purposeful shift in production. During the seven years from 1923/24 to 1929/30, coal and crude oil production more than doubled, going from 97 to 254 million roubles, metal and electric manufacture increased seven times, from 288 to 2055 million roubles, chemical eight times, from less than 79 to 671 million roubles, textile four times, from 496 to 1952 million roubles, and leather and shoe nearly five times, from 117 to 616 million roubles. (See Tables VII and VIII.)

For the sake of comparison in the series of Planned National Industry, 1925/26—1929/30 (Production series 2), data from the Control Figures for 1929/30 of the plan for the year are tabulated beside data of estimated accomplishment, published

in November 1930. In no categories do the two exactly coincide. The closeness of certain of the estimates, however, especially metal, electrotechnical, leather and shoe, china, food and salt industries are notable. The total realization, if these figures prove correct, showed apparently less than a six percent deviation from the plan. (See Table IX.)

Production series number 3 gives the history of industrial production during the world war and civil war years. The economic breakdown during the great war years becomes apparent. If the data on transportation were included, it would be more apparent. The drop in 1917 and the post-revolutionary years until 1920 when the output of coal, for example, drops to 20 percent of iron ore and cast iron drops to two and three percent of the 1913 level, tells its own story. The year 1923 is shown to be well on the road to recovery. (See Table X.)

The rise in agricultural production between 1923/24 and 1929/30 is less striking.[17] Pre-war levels have hardly yet been reached if one estimates the total in pre-war roubles. Certain categories which have greatly outstripped the 1913 base are exceptional rather than the rule.

Unfortunately the figures on agriculture available did not include the accomplishments for the year 1929/30. Conclusions can, therefore, be tentative only. Certain items, such as the production of grain, have according to all reports far outstripped the plan, through the successful harvests of the new collective and state farms.

In this connection it should be stated that the processes both of reorganization and of mechanization have only recently been introduced into the agricultural economy. Peasant farms, realigned though some of them were through the distribution of landlords' estates, continued to operate after the revolution much as before. How much material change other than that due to the disorganization of the land through civil war, intervention and famine, accrued to the mass of the Russian peasants, until recently, is doubtful. The agricultural revolution in Russia came with the development of collective farming within the last

[17] The series Agriculture 1a given do not include forestry or fishing and hunting.

two years. The crisis in the situation was passed in the winter and spring of 1930.

Future statistics will show whether collectivization proves to be the economic boon to Russian agriculture which the Soviet government confidently expects. The evidence so far attainable indicates a high degree of success. The fears of other wheat growing countries of future Soviet wheat export reflect it. The application of tractors and mechanized farming alone, aside from the economic advantage of peasant organization, would lead one to expect it.

Three more series (Tables XV, XVI and XVII), one on transportation and two on electric power, are consistent with the data presented. Both show the increase in recent years. Freight handled in 1929/30 was more than double that handled in 1913 and the output of electric power was increased four times. Neither series include the years of breakdown. Both transportation and power have problems facing them, as indeed have industry and agriculture, which are far from solved for the future. It is the function of this report, however, to present the statistical data of the past years rather than to discuss the future, except when such discussion seems essential to an understanding of the figures given.

Finally a series (Table XVIII) is included presenting gross production of the Soviet Union industry and agriculture for the years 1913 to 1928/29, from a recent publication in English of the Five Year Plan by G. T. Grinko, vice-chairman of the State Planning Commission. [18]

The notable point in all the series is the growth of industrial production in the period; not simply of reconstruction but of new construction since the pre-war levels were reached, in 1925/26. The series both of volume and of values reveal it. One can hardly wonder that employment has risen and unemployment decreased with production figures mounting at the rate which they have done.

[18] Grinko G. T., The Five Year Plan of the Soviet Union, International Publishers, New York 1930, pp. 33 and 34.

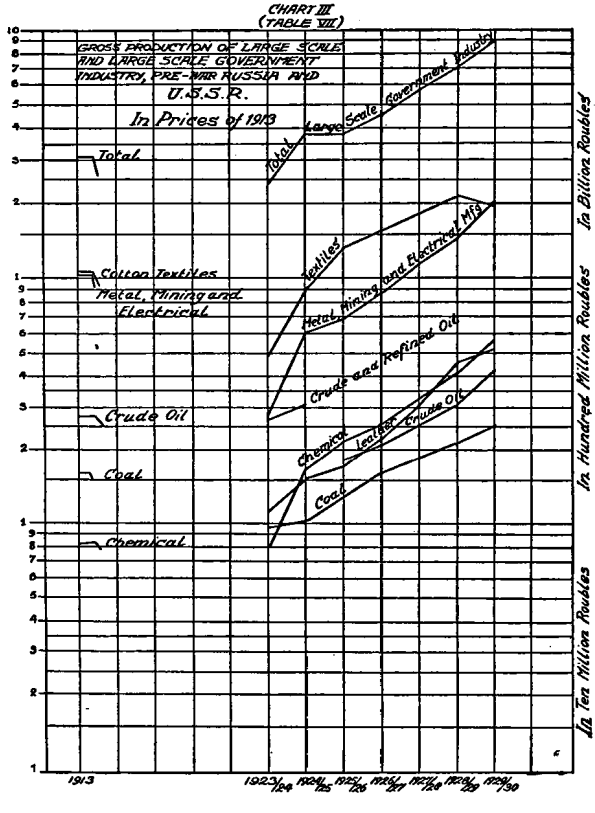


CHART III
(TABLE VII)
GROSS PRODUCTION OF LARGE SCALE AND LARGE SCALE GOVERNMENT INDUSTRY, PRE-WAR RUSSIA AND U.S.S.R.
In Prices of 1913
Total
Cotton Textiles
Metal, Mining and Electrical
Crude Oil
Coal
Chemical
Total Large Scale Government Industry
Textiles
Metal, Mining and Electrical Mfg
Crude and Refined Oil
Chemical
Leather
Fuluse Oil
Coal
In Billion Roubles
In Hundred Million Roubles
In Ten Million Roubles
1913
1923/24
1924/25
1925/26
1926/27
1927/28
1928/29
1929/30

TABLE VII. INDUSTRIAL PRODUCTION SERIES 1a.

GROSS PRODUCTION OF LARGE SCALE AND LARGE SCALE GOVERNMENT INDUSTRY.

Pre-war Russia and U. S. S. R.
In Million Roubles, Producers' Prices of 1913[1]

Year 1913 compiled from Control Figures 1925/26, p. 83: years 1923/24 and 1924/25 compiled from Control Figures 1926/27, pp. 351 and 334; years 1925/26 to 1928/29 compiled from Control Figures 1929/30, p, 503; year 1929/30 compiled from Planned Economy, October-November 1930, pp. 346-7.

	Census Industry			Planned National Economy					
	1913	1923/24	1924/25	1925/26[8]	1926/27	1927/28	1928/29	1929/30	% 1929/30 to 1913
Coal	159.6	97.6	104.7	132.9	169.1	188.2	216.7	254.0	159.1
Oil	280.7	270.0[2]	309.0[2]	181.7	219.9	256.1	315.4	425.0	151.5
Metal, Ore, Mining and Electrical	1028.4	288.3	603.2	699.5	892.7	1118.8	1465.2	2055.9	199.9
Wood Working		82.9	110.0	211.7	261.9	332.4	477.3	352.4	—
Chemical (A + B)	81.6[3]	78.7	165.4	220.2	259.6	335.9	422.0	671.4	821.8
Textile	1065.6[4]	496.4	904.1	1319.9	1570.6	1865.7	2125.5	1952.8	183.0
Leather		117.1	159.2	177.7	222.1	308.3	447.3	616.7	—
Salt	8.5	5.4	8.2	6.5	8.1	9.5	10.4	13.7	161.1
Sum of Items listed	2624.4	1436.4	2363.8	2950.1	3604.1	4414.9	5479.8	6341.9	242.4
TOTAL Large Scale and Government Industry	3085.6[5]	2383.3[7]	3739.3[7]	3793.2[8]	4545.0	5739.9	7102.2	8857.3	—

[1] Figures for 1913 to 1924/25 are given by the Control Figures in Producer's Prices of 1913. Figures for 1925/26 to 1929/30 are given by Control Figures in Producers' Prices of 1926/27 and have here been adjusted to 1913 prices by application of the index of Producers' Prices for 1926/27.

[2] Include Refined Oil 1923/24 and 1924/25 only.

[3] Rubber and Matches only.

[4] Cotton only, 60-70 % of total textile probably.

[5] Cotton and Wool only.

[6] Probably not complete.

[7] Total taken from pp. 334-5. See also pp. 286-7.

[8] Planned National Economy from 1925/26-1929/30.

TABLE VIII. INDUSTRIAL PRODUCTION SERIES 1b.

GROSS PRODUCTION OF LARGE SCA

In Quantity, Years 1913 (1923, 1923/24) compiled from Control Figur
1929/30 pp. 501-2; year 1929/30 (estimated realization) compiled fr

Industry	Units	1913	1924/25	1925/2
Coal	Million tons	29.1	16.1	25.4
Oil	„ „	9.2	7.0	8.5
Iron ore	„ „	9.2	2.1	3.3
Manganese ore	„ „	—	—	0.4
Metal				
Cast iron	„ „	4.2	1.3	2.2
Rolled iron	„ „	3.5	1.3	2.2
Copper	1000 „	—	—	—
Zinc	„ „	—	—	—
Lead	„ „	—	—	—
Steel	Million „	4.2	1.9	—
Locomotives for transport	Pieces	—	—	214
Locomotives for industry	„	—	—	—
General machine construction	Million roubles	—	—	—
Steam Turbines	„ „	—	—	—
Motors	„ „	—	—	—
Boilers	„ „	—	—	—
Agricultural machine constr.	„ „	—	—	—
Ploughs	1000 pieces	—	—	582
Sewing machines	„ „	—	—	59.4
Tractors	Pieces	—	—	878
Building material				
Cement	Million brl.	—	—	8.5
Glass	1000 tons	—	—	—
Bricks	Billion pieces	—	—	1037
Chemical "A"				
Sulphuric acid	1000 tons	—	—	—
Superphosphate	„ „	—	—	79.5
Phosphor meal	„ „	—	—	—
Textile				
Cotton yarn	„ „	—	—	240.0
„ fabrics	Million meters	2238	1489	2021
Woollen „	„ „	—	—	65.4
Linen „	„ „	—	—	159.2
Silk „	„ „	—	—	—
Leather shoe				
Shoes	„ pairs	—	—	9.6
Chemical "B"				
Goloshes	„ „	—	—	25.1
Matches	„ cases	3.7	3.2	—
Paper	1000 tons	—	—	—
Woodworking				
Planks	Million cu.mtrs.	—	—	5.9
Tree trunks	„ „	—	—	—
Com. lumber	„ „	—	—	—
Wood	„ „	—	—	—
Sowing mat.	„ „	—	—	—
Alimentary				
Gran. sugar	1000 tons	1356	437	1063
Veg. oil[1]	Million „	—	—	—
Conserves	1000 „	—	—	—
Cigarettes	billion p.	25.9	26.4	—
Mahorka	1000 boxes	—	—	—
Salt	1000 ton[2]	1946.0	1114.0	2365

[1] Without cotton oil.
[2] Confusion exists in the data as to whether this is thousand or million tons.

DUSTRY PRE-WAR RUSSIA AND U. S. S. R.

6/27; p. 320; year 1925/26-1929/30 (Plan) compiled from Control Figures nned Economy Oct./Nov. 1930, pp. 344-5.

1926/27	1927/28	1928/29	1929/30 Plan	Modified Units	1929/30 est. real.
32.1	35.4	40.6	51.6	—	47.5
10.3	11.8	13.7	16.2	—	17.7
4.8	6.0	7.1	10.8	—	10.1
0.5	0.7	1.4	1.7	—	—
3.0	3.3	4.0	5.5	—	5.0
2.8	3.3	3.8	4.7	—	—
21.3	28.3	38.0	48.5	—	51.0
2.3	3.2	4.8	8.8	—	4.4
—	—	—	—	1000 tons	9.3
—	—	—	—	—	5.6
365	459	559	610	—	53.0
116	113	151	265	—	—
439.0	591.3	792.5	1144.9	—	—
—	—	—	—	1000 kwt.	195.7
—	—	—	—	Pieces	85.0
—	—	—	—	1000 sq. mtrs.	121.2
111.1	148.2	211.9	371.0	—	—
953	1136	1678	2690	—	—
57.2	39.8	85.9	273.0	—	—
993	1400	3000	10600	—	—
9.7	11.9	14.4	22.0	—	19.4
—	325.1	376.5	480.0	—	433.8
1398	1691	2880	5100	—	2.5
168.8	208.1	271.8	425.0	—	360.0
90.0	149.8	213.0	475.0	—	400.0
35.0	27.5	45.0	400.0	—	195.0
277.0	322.0	353.0	394	—	—
2452	2695	2952	3280	—	2594.1
83.7	96.4	113.2	131.2	—	128.9
174.9	167.1	171.8	210.2	—	200.0
—	—	—	—	Mill. mtr.	18.7
14.7	23.6	40.8	62.0	—	—
29.6	36.3	42.2	53.0	—	42.7
4.3	5.5	7.0	9.5	—	9.5
—	280.0	265.0	425.8	—	474.4
7.6	8.7	11.8	18.0	—	—
—	2.2	4.3	16.1	—	—
—	—	—	—	Mill. cu. mtrs.	108.0
—	—	—	—	" "	69.0
—	—	—	—	" "	23.4
870	1340	1280	1070	—	836
148.0	230.2	303.8	360.0	1000 tons	335
23.0	28.0	47.0	84.0	Mill. cans	214.7
39.0	47.1	53.0	57.0	—	61.1
2842	3270	3200	3200	—	3067
—	2365	2670	3300	—	—

TABLE IX. INDUSTRIAL PRODUCTION SERIES 2.

GROSS PRODUCTION OF PLANNED NATIONAL ECONOMY U. S. S. R.

(In million roubles, Producers' prices of 1926/27).

Years 1925/26 to 1929/30 compiled from "Control Figures 1929/30", p. 503; Year 1929/30 compiled from "Planned Economy", October-November 1930, pp. 346-7.

	1925/26	1926/27	1927/28	1928/29	1929/30 plan	1929/30 estimated realization
1. Coal	256.3	326.0	362.0	417.9	527.0	489.7
2. Oil	350.4	424.0	493.0	608.2	752.8	819.4
3. Mining of ores & minerals	44.2	58.3	76.8	113.3	182.6	147.2
4. Metal & mach. building	1206.0	1528.0	1897.8	2441.3	3369.5	3343.8
5. Electrotechnical mfg.	98.5	134.9	182.5	271.0	460.4	472.8
6. Building materials	184.7	243.8	291.1	385.4	599.4	418.4
7. Wood working	408.2	505.0	640.9	920.2	650.0	675.9
8. Chemical basic (A)	153.2	191.3	259.6	344.3	514.7	638.5
9. Chemical derived (B)	271.3	309.0	388.1	469.4	674.0	656.0
10. Textiles	2544.7	3028.2	3597.1	4098.0	4774.0	3765.4
11. Machine sewing	[1]	130.0	301.5	544.6	829.4	951.4
12. Leather-Shoe	342.6	428.3	594.4	862.5	1157.5	1189.0
13. China-porcelaine	[1]	38.8	44.2	51.8	63.0	65.0
14. Paper	121.3	129.8	147.1	185.8	220.8	246.1
15. Polygraphic	[1]	59.1	77.8	95.0	111.2	138.0
16. Alimentary (Food)	926.3	861.5	1229.4	1303.3	1426.5	1423.7
17. Salt	12.5	15.6	18.3	20.1	25.0	26.4
18. Others[2]	394.0	350.9	462.7	561.1	753.7	1610.2
TOTAL[3]	7313.2	8762.7	1106.5	15693.0	18092.0	17076.9

[1] Contrary to the Control Figures of previous years and the „Five Year Plan" in the sugar industry production planned by the national industry only (that is without rented and cooperative productions) has been shown.
[2] Columns 1-5 include "others" and balance of fuel beside coal and oil; column 6 includes Glass, Wood and Half Production.
[3] Discrepancy in "total" due to application of index.

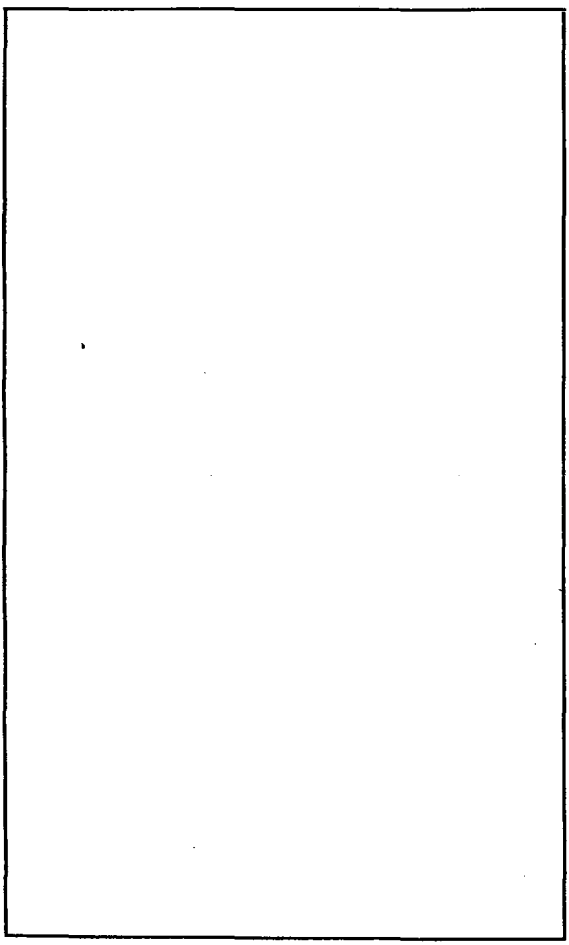


TABLE Xa. INDUSTRIAL PRODUCTION SERIES 3.

PRODUCTION OF LARGE SCALE INDUSTRY, PRE-WAR RUSSIA AND U. S. S. R., 1913—1922/23.

In Quantity.

Compiled from: Central Statistical Department of the R. S. F. S. R.; Statistical Handbook, 1913-17, Moscow, 1922; Statistical Yearbook, 1918-20; Statistical Handbook, U. S. S. R., 1928, Moscow, 1929; Encyclopedia of Russian Exports, Soviet Union Trade Delegation, Berlin, 1925.

Industries	Units	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1922/23
Coal incl.	mil. poods	2,200	2,175	1,905	1,995	1,814	721	516	475	474	502	591
Donetz coal	„ „	1,543	1,684	1,627	1,751	1,510	338	273	330	—	—	—
Naphtha	„ „	563.4	556.9	568.1	492.1	422.6	213.4	256.3	212.8	222.3	272.9	294.2
Peat	„ „	89.0	100.7	86.5	83.6	71.0	61.1	66.5	84.7	112.6	118.7	129.2
Iron Ore	mil. tons	8.8	—	—	—	—	0.772	0.183	0.164	0.129	0.244	0.481
Cast iron	„ „	4.635	4.257	3.690	3.738	3.000	0.515	0.113	0.115	0.116	0.188	0.300
Pig iron	„ „	—	—	—	—	—	0.402	0.199	0.161	0.182	0.317	0.587
Steel	„ „	4.868	4.738	4.900	4.279	3.082	0.404	0.199	0.162	—	—	—
Finished iron & steel products	„ „	5.404	5.292	4.524	4.698	—	—	—	—	—	—	—
Manganese	1000 „	1254.7	906.0	537.6	467.0	380.1	145.6	54.8	92.0	9.0	104.0	271.2
Copper	„ „	507.3	377.0	305.6	246.5	188.9	134.0	63.0	4.1	4.1	13 0	61.0
Asbestos	„ „	22.51	15.91	10.18	12.18	6.27	1.36	0.68	1.45	1.87	3.31	5.44
Salt	mil. „	2.195	2.054	—	—	—	0.132	0.61	0.765	0.983	0.743	1.173
Gold	tons	40.02	43.22	39.80	34.01	27.21	25.94	24.19	3.18	2.76	9.17	10.91
Silver	„	9.38	9.38	19.95	16.50	15.00	—	—	—	—	—	—
Platinum	poods	299.0	298.0	206.0	150.0	187.0	82.0	75.0	21.0	12.0	42.0	—
Matches	mil. cases	4.10	4.50	3.06	3.06	1.61	1.02	1.01	0.633	0.782	1.030	1.40
Rubbergoods in values	roubles, 1913	121.5	117 8	106.3	127.2	134.4	25.32	10.8	6.18	9.99	—	—
Superphosphates	1000 tons	27.52	17.64	—	67.74	—	—	16.33	9.10	5.28	7.52	16.49
Naphtha products	mil. „	1.323	1.323	1.240	—	—	1.439	2.341	1.673	2.936	3.058	3.048
Granulated Sugar	„ „	1.769	1.082	1.324	—	—	0.333	0.079	0.090	0.050	0.186	0.196
Tobacco	1000 „	121.8	134.0	117.1	121.7	—	—	—	—	—	—	—
Mahorka	„ „	122.6	126.4	124.0	—	—	28.5	18.7	21.3	11.9	13.3	19.5
Cigarettes	mil. pieces	—	—	—	31.98	—	12.7	10.3	4.85	5.15	12.59	10.79

TABLE Xa. INDUSTRIAL PRODUCTION SERIES 3.

PRODUCTION OF LARGE SCALE INDUSTRY, PRE-WAR RUSSIA AND U.S.S.R., 1913—1922/23.

In Quantity. In percent of 1913.

Compiled from: Central Statistical Department of the R.S.F.S.R.; Statistical Handbook, 1913-17, Moscow, 1922; Statistical Yearbook, 1918-20; Statistical Handbook U.S.S.R. 1928, Moscow, 1929; Encyclopedia of Russian Exports, Soviet Union Trade Delegation, Berlin, 1925.

Industries	Units	Percent of 1913									
		1914	1915	1916	1917	1918	1919	1920	1921	1922	1922/23
Coal incl.	mil. poods	98.9	86.6	90.4	82.4	32.8	23.5	21.6	21.5	22.8	26.9
Donetz coal	„ „	109.5	105.5	113.5	97.9	21.9	17.7	21.4	—	—	—
Naphtha	„ „	98.9	100.9	87.4	75.0	38.0	45.5	37.7	39.5	48.5	52.4
Peat	„ „	120.2	97.2	94.0	79.8	68.6	74.7	95.2	126.5	133.5	145.2
Iron Ore	„ tons	—	—	—	—	8.76	2.1	1.86	1.46	2.78	54.7
Cast Iron	„ „	91.8	79.4	80.6	64.6	11.1	2.44	2.47	2.50	4.05	6.45
Pig Iron	„ „	—	—	—	—	8.67	4.29	3.47	3.93	6.83	12.7
Steel	„ „	97.1	100.6	87.8	63.2	8.3	4.10	3.3	—	—	—
Finished Iron & Steel Products	„ „	98.0	83.7	87.0	—	—	—	—	—	—	—
Manganese	1000 „	72.2	42.0	37.2	30.2	11.6	4.37	7.32	0.71	8.30	21.6
Copper	„ „	74.4	60.2	48.4	37.3	26.5	12.4	0.80	0.80	2.56	12.0
Asbestos	„ „	70.7	45.2	54.5	27.9	6.05	3.2	6.44	8.31	14.7	24.2
Salt	mil. „	93.6	—	—	—	6.1	27.8	34.8	44.8	33.8	53.4
Gold	tons	108.0	99.5	85.0	68.0	64.8	60.5	7.95	6.9	22.9	27.2
Silver	„	100.0	213.0	—	—	—	—	—	—	—	—
Platinum	poods	99.7	68.9	50.1	62.5	27.4	25.1	7.0	4.0	13.8	—
Matches	mil. cases	109.7	74.6	74.6	39.2	24.9	24.6	15.5	19.07	25.1	34.2
Rubbergoods in values	roubles, 1913	97.0	87.4	104.7	110.5	20.8	8.9	5.9	8.2	—	60.0
Superphosphates	1000 tons	64.2	—	246.0	—	—	59.4	33.1	19.2	27.3	230.5
Naphtha Products	mil. „	100.0	93.8	—	—	109.0	177.0	126.5	222.0	231.0	110.7
Granulated Sugar	„ „	61.2	74.8	—	—	18.8	4.46	5.04	2.82	105.0	—
Tobacco	1000 „	110.5	98.1	100.0	—	—	—	—	—	—	—
Mahorka	„ „	103.2	101.2	—	—	23.3	15.3	17.4	9.7	10.8	85.0
Cigarettes	mil. pieces	—	—	—	—	39.7	80.7	38.2	40.6	99.2	15.9

TABLE XI. INDUSTRIAL PRODUCTION SERIES 4.

GROSS PRODUCTION LARGE SCAL
AT AVERAGE WHOLESAL

(Compiled from the Monthly Statistical Bulleti

In thousan

	Years	October	Novem-ber	Decem-ber	January	Februa
Coal	1928/29	32,647	31,428	35,127	34,224	32,6
	1929/30	39,070	38,041	42,476	43,482	42,2
Naphtha	1928/29	30,800	29,957	30,826	30,303	25,8
	1929/30	35,167	34,841	36,791	35,086	31,7
Ore	1928/29	7,328	6,606	6,980	7,416	6,8
	1929/30	9,901	8,963	10,034	10,032	9,8
Salt	1928/29	1,776	1,112	1,003	970	9
	1929/30	2,184	1,854	1,444	1,430	1,3
Silicate	1928/29	26,348	24,855	25,540	27,191	25,2
	1929/30	32,492	31,185	34,216	33,252	32,9
Metal	1928/29	191,268	184,731	202,727	208,026	200,6
	1929/30	248,060	241,981	284,561	286,056	294,0
Electrotechn. mfg.	1928/29	21,668	19,565	21,794	21,278	22,4
	1929/30	28,288	28,060	34,224	35,575	40,5
Textile	1928/29	321,617	285,357	296,132	305,913	307,3
	1929/30	372,152	321,753	354,599	341,763	340,0
Clothing	1928/29	52,186	50,135	49,630	47,172	47,9
	1929/30	75,803	69,381	77,716	72,946	76,1
Leather	1928/29	56,613	52,330	54,200	56,076	46,2
	1929/30	78,740	69,345	82,250	83,122	84,8
Chemical	1928/29	61,928	60,686	64,757	68,273	64,6
	1929/30	85,845	82,522	92,529	94,356	94,6
Alimentary non-stop pr.	1928/29	61,169	53,970	53,611	57,004	55,2
	1929/30	67,883	60,757	65,334	67,414	64,1
Woodworking	1928/29	28,052	24,007	25,687	28,083	28,1
	1929/30	39,639	32,705	37,562	42,720	42,5
Polygraphic	1928/29	5,869	5,451	5,310	5,204	5,2
	1929/30	7,304	6,299	7,002	6,928	6,7
Paper	1928/29	14,250	13,043	13,890	14,218	14,3
	1929/30	19,049	17,465	19,699	19,748	18,7
Seasonal alimentary pr.	1928/29	18,187	43,249	51,618	52,979	49,3
	1929/30	16,879	44,500	61,281	61,136	52,3
Total production	1928/29	988,503	943,175	997,608	1,023,291	996,7
	1929/30	1,229,236	1,163,704	1,318,731	1,312,877	1,308,0
Including Means of production	1928/29	413,489	395,000	426,107	434,328	412,4
	1929/30	528,128	515,471	584,468	593,298	598,4
Consumption goods	1928/29	575,014	548,175	571,501	588,963	584,3
	1929/30	701,108	648,233	734,263	719,579	709,5

NDUSTRY 1928/29-1929/30.

ELLING PRICES OF 1926/27.

uly 1930. V. 10. No. 85. pp. 15-17.)

oubles by months.

arch	April	May	June	July	August	Septem-ber	Total for the year	Total for 11 months fisc. yr.
35,754	34,467	27,953	31,740	33,012	32,775	32,460	394,250	361,790
47,403	43,768	39,927	39,666	33,598	30,139			439,794
27,804	27,987	33,531	32,593	35,665	35,845	34,604	375,766	341,162
38,146	41,050	43,058	41,394	44,024	45,400			341,162
7,797	8,116	7,658	9,065	9,737	9,321	9,750	96,641	86,891
12,356	11,445	11,940	12,738	11,910	12,081			121,217
1,123	1,252	1,590	2,087	2,636	2,834	2,951	20,248	17,297
1,470	1,734	1,886	2,262	2,738	2,750			21,055
27,251	28,889	24,439	26,295	28,151	29,364	31,088	324,644	293,556
36,927	37,086	35,852	36,561	35,817	35,438			381,738
26,603	237,138	214,042	229,884	214,715	237,488	281,695	2,628,965	2,347,270
49,375	318,733	323,270	323,297	301,495	312,512			3,283,388
26,817	25,528	24,701	26,250	20,137	27,478	33,822	291,465	257,643
46,593	44,771	46,154	43,394	38,855	48,485			434,973
14,937	357,771	269,675	317,351	289,329	317,609	350,199	3,713,251	3,363,052
62,527	363,531	246,056	240,339	171,841	178,854			3,293,492
60,319	60,212	49,628	45,199	54,731	67,300	77,780	652,234	574,454
93,172	94,675	95,827	73,601	84,370	99,707			913,325
81,859	70,824	64,969	68,653	70,109	73,583	78,594	764,095	685,501
96,220	96,677	95,700	93,707	88,630	98,051			967,285
70,736	77,055	63,054	57,207	69,648	76,679	79,709	814,111	734,402
07,762	103,650	100,194	73,776	81,812	95,103			1,012,156
55,867	59,538	47,483	45,823	54,548	62,534	65,559	726,405	606,846
71,675	68,915	69,876	65,976	62,447	76,890			741,310
31,206	29,675	18,844	27,785	37,422	41,819	41,284	362,023	320,739
49,966	43,082	33,448	44,156	49,002	48,658			463,537
5,393	5,882	4,959	5,225	5,323	6,215	6,648	66,726	60,078
7,368	7,132	6,695	6,645	6,913	7,128			76,201
16,062	16,692	14,590	16,717	18,306	17,877	18,370	188,364	169,994
21,158	19,932	19,276	20,652	21,784	20,714			218,216
54,446	55,241	47,111	25,496	14,006	9,464	9,533	430,703	421,170
47,397	31,785	19,021	12,939	10,479	6,413			364,191
72,966	1,157,838	977,221	1,030,693	1,006,785	1,118,820	1,224,051	12,537,143	11,313,092
77,022	1,416,486	1,277,361	1,225,168	1,140,085	1,215,975			14,084,700
62,497	475,411	435,441	469,962	469,970	507,534	558,577	5,460,727	4,902,150
02,489	662,281	657,941	668,922	641,651	666,543			6,819,686
09,869	682,427	541,780	560,731	536,815	611,286	665,474	7,076,416	6,410,942
74,533	754,205	619,420	556,246	498,434	549,432			7,265,014

GROSS PRODUCTION OF AGRICULTURE, PRE-WAR RUSSIA AND U. S. S. R.

Without Forestry

(In million Roubles, Producers' Prices of 1913 [1])

Year 1913, Control Figures 1925/26, pp. 62-63; years 1923/24 and 1924/25 compiled from Control Figures 1926/27, p. 339; years 1925/26 to 1929/30 compiled from Control Figures 1929/30 pp 534/7.

	1913	1923/24	1924/25	1925/26	1926/27	1927/28	1928/29	1929/30 plan
Grains	4449.8	2529.6	2306.6	2416.7	2599.3	2406.0	2378.6	2444.5
Potatoes	498.6	524.3	509.3	675.3	748.1	709.0	778.5	817.3
Vegetables and fruits	835.9	450.7	567.2	785.7	804.6	808.3	897.4	915.8
Hay, Sown Grass, Ears, Pulp & Straw, etc.	2433.4	1516.9	1490.2	2480.3	2775.8	2669.3	2812.4	2811.3
Unginned Cotton	183.0	87.9	91.1	106.8	105.7	135.7	155.2	184.5
Oil-Seeds	164.3	178.9	164 6	173.3	140.3	165.8	169.7	175.8
Flax	89.2	69.6	89.2	89.4	76.5	68.1	87.0	105.5
Hemp	65.0	69.7	63.0	115.9	103.5	122.8	126.3	124.4
Other technical Cultures	139.6	49.9	53.4	109.4	86.1	117.0	107.7	96.2
Sugar Beets		27.7	31.7	70.4	49.5	80.9	78.8	65.2
Tobacco		16.9	16.1	25.0	21.2	23.8	18.3	21.3
Mahorka		5.3	5.6	14.0	15.4	12.3	10.6	9.7
Meat and Fat	1021.0	576.1	746.2	962.2	1072.5	1163.8	1372.3	1121.0
Dairy and Milk Products	1194.0	892.7	944.8	1153.5	1249.7	1294.9	1241.7	1350.8
Fowl	129.2	59.4	88.8	147.1	124.9	140.9	150.6	158.1
Eggs	181.1	75.7	102.4	172.7	194.9	213.7	208.0	239.2
Raw leather & other raw prod.	317.8	198.6	237.5	320.8	347.7	381.2	429.7	413.3
Manure	276.4	195.2	185.4	218.5	227.5	233.7	234.4	234.4
Others	23.0	412.8	348.0	345.8	384.3	269.6	— 52.8	207.2
Bee & Silk Culture	23.0	11.0	12.5					
Growth of Herd		401.8	335.5	345.8	384.3	269.6	— 52.8	207.2
TOTAL Agricultural Production [2]	11831.3	7838.0	7987.8	10275.9	11041.7	10899.7	11097.0	11399.3

[1] Figures for 1913 to 1925/26 are given by the Control Figures in Producers' Prices of 1913. Figures for 1926/27 to 1929/30 are given by Control Figures in Producers' Prices of 1926/27 and here have been corrected by application of the index of Producers' Prices for 1926/27 with 1913 prices as base. See Appendix for discussion of Index used.

[2] Discrepancy in totals due to application of index.

TABLE XIII. AGRICULTURAL PRODUCTION SERIES 1b.

GROSS PRODUCTION OF AGRICULTURE, PRE-WAR RUSSIA AND U. S. S. R.

In Quantity.

Compiled from Control Figures 1926/27, pp. 340, 341, for years 1913, 1923/24-1924/25, From Control Figures 1929/30, pp. 532, 533, for years 1925-1930.

	In Million Poods			Unit	1925	1926	1927	1928	1929	1930 Plan
	1913	1923/24	1924/25							
Grains	(5,448.7)	(3,364.2)	(3,067.6)	mill. quintals	746.7	783.8	735.8	726.7	762.5	889.0
Potatoes	1,828.8	2,184.7	2,122.0	mill. tons	395.4	438.0	415.1	455.8	478.5	512.5
Vegatables and Fruit	1,635.0	1,286.6	1,551.1							
Straw Ears and Pulp	8,404.0	4,883.5	4,447.0	„ „	1,138.3	1,281.5	1,169.6	1,182.9	1,197.9	
Hay and Sown Grass	4,839.3	3,532.6	3,665.4	„ „	809.2	895.9	870.5	934.5	907.3	
Cotton Unginned	38.6	9.4	22.6	1000 quint.	5,651.0	5,594.0	7,183.0	7,220.0	9,766.0	1,451.9
Flax	27.7	14.6	18.7	„ „	3,623.0	3,100.0	2,760.0	3,524.0	4,277.5	
Hemp	24.9	20.8	18.8	„ „	4,849.0	4,327.0	5,135.0	5,282.0	5,203.0	5,550.0
Oil Seeds	155.9	152.9	140.7	„ „	33,777.0	26,370.0	31,998.0	32,858.0	33,610.0	39,791.0
Sugar Beets	662.4	172.9	198.4	mill. „	90.7	68.7	104.1	101.4	84.0	149.0
Tobacco	1.7	1.6	1.5	1000 „	435.2	367.9	412.9	318.6	(370.0)	618.0
Mahorka	4.6	3.9	4.1	„ „	1,430.0	1,573.0	1,262.0	1,081.0	990.0	1,540.0
Meat	195.5	126.0	163.2	„ tons	34,192.0	38,018.0	41,251.0	48,643.0	39,733.0	
Milk	1,492.0	1,487.8	1,574.6	mill. „	288.0	312.0	323.3	310.0	337.2	
Fowl	17.0	9.9	14.8	1000 „	3,030.0	2,572.0	2,900.0	3,100.0	3,255.0	
Eggs	28.0	13.0	17.0	mill. units	8,464.0	9,550.0	10,459.0	10,195.0	11,724.0	
Manure	28,023.0	16,665.0	15,442.0							
Large Hides				1000 „	10,944.0	12,102.0	13,359.0	16,612.0	14,068.0	
Small Hides				„ „	57,178.0	61,776.0	68,920.0	78,903.0	74,760.0	
Wool				1000 quint.	1,428.0	1,594.0	1,676.0	1,747.0	1,800.0	

TABLE XIV. AGRICULTURAL PRODUCTION SERIES 2.

GROSS PRODUCTION OF AGRICULTURE, U. S. S. R.

In Million Roubles. Producers' Prices of 1926/27.
See Control Figures 1929/30, pp. 534-7.

	1925/26	1926/27	1927/28	1928/29	1929/30
A. PLANT CULTURE.					
1. Rye	1026.7	1066.4	1089.1	852.8	901.8
2. Wheat	1390.2	1624 0	1379.1	1409.8	1313.2
3. Barley	200.1	183.0	153.9	187.8	251.4
4. Oats	505.1	644.9	552.4	683.9	689.3
5. Buckwheat	84.1	73.9	90.8	88.2	88.2
6. Millet	157.1	76.9	113.2	102.8	125.3
7. Corn	141.6	108.2	112.4	107.6	136.4
8. Other grains	103.2	104.4	101.3	118.3	144.0
TOTAL GRAINS.	3608.1	3880.8	3592.2	3551.2	3649.6
9. Cotton	159.4	157.8	202.6	231.8	275.4
10. Sugar Beets	105.2	73.9	120.8	117.6	97.4
11. Flax Fibre	133.5	114.2	101.7	129.9	157.6
12. Hemp Fibre	173.1	154.5	183.3	188.6	185.7
13. Oil yielding plants	258.7	209.5	247.6	253.4	262.5
14. Tobacco	37.4	31.6	35.5	27.4	31.8
15. Mahorka	20.9	23.0	18.4	15.8	14.5
16. Potatoes	1008.3	1116.9	1058.5	1162.3	1220.2
17. Vegetables	883.8	873.6	941.4	999.7	1020.0
18. Fruit and grapes	289.3	327.7	265.4	340.2	347.3
19. Straw and barn sweepings	1576.8	1783.8	1612.0	1632.2	1660.5
20. Hay	1919.8	2119.0	1979.3	2105.5	1999.8
21. Sown grass	206.5	241.5	394.0	461.5	537.0
TOTAL PLANT CULTURE	10380.5	11108.1	10752.7	11217.1	11459.3
including technical plants	888.2	764.5	909.9	964.5	1024.9
B. CATTLE RAISING					
1. Meat	1440.2	1601.3	1737.5	2048.8	1673.6
2. Milk	1722.2	1865.8	1933.3	1853.9	2016.7
3. Fowls meat	219.7	186.5	210.3	224.8	236.0
4. Eggs	257.9	291.0	319.0	310.6	357.2
5. Large Hides	114.9	127.1	140.3	174.4	147.7
6. Small hides	140.1	151 4	168.9	193.3	183.2
7. Wool	154.1	172.0	180.8	188.5	194.2
8. Others	69.9	68.6	79.1	85.3	91.9
9. Growth of herd	+516.3	+573.7	+ 402.5	— 78.8	+309.3
10. Manure	326.2	339.7	348.9	350.0	350.0
TOTAL CATTLE RAISING	4961.5	5377.1	5520.6	5350.8	5559.8
GENERAL TOTAL	15342.0	16485.2	16273.3	16567.9	17019.1

TABLE XV.

RAILWAY OPERATIONS, 1913 and 1925-1931.								
Pre-war Russia and U. S. S. R.								
Taken from Economic Handbook of Soviet Union, New-York, 1931, p. 68.								
	1913	1925/ 1926	1926/ 1927	1927/ 1928	1928/ 1929	1929/ 1930 (prelim- inary)	1931 (prog- ram.)	1932/ 1933 (orig. 5-year Plan.)
Length of Railway Lines in operation (thousand Kilometers)	58.5	74.6	75.7	76.9	77.6	78.0	81.0	90.0
Railway Freight operations (bill. ton-kilometers)	65.7	68.9	81.7	88.2	106.7	138.0	186.4	162.7
Railway Passenger operations (bill. passenger-kilometers)	25.2	23.4	22.1	23.6	29.5	46.8	68.0	35.4
Freight carried by Railways (mill. metric tons)	132.4	116.7	135.9	150.6	176.5	234.9	330.0	281.0
Passengers carried by Railways (millions)	184.8	262.7	254.2	280.8	343.2	510.2	720.0	455.0

TABLE XVI.

CAPACITY OF POWER PLANTS.				
Pre-war Russia and U. S. S. R.				
(in Thousand Kw.)				
Compiled from Control Figures 1929/1930, p. 496. Supplemented by Economic Handbook of the Soviet Union, p. 52.				
Year	Regional Power Plants	Factory and other special Power Plants	Local including Rural Power Plants	TOTAL
1913	250	770	190	1210
1924/25	338	798	233	1364
1925/26	395	760	257	1452
1926/27	510	885	237	1662
1927/28	528	981	283	1792
1928/29	662	1156	337	2155
1929/30	1300	1100	485	2885

TABLE XVII.

OUTPUT OF ELECTRIC CURRENT.				
Pre-war Russia and U. S. S. R.				
(in Million K. W. H.)				
Compiled from the Control Figures 1929/30, p. 496, and the Economic Handbook of the Soviet Union, p. 52.				
Year	Regional Power Plants	Factory and other special Power Plants	Local including Rural Power Plants	TOTAL
1913	431	1255	259	1945
1924/25	866	1142	266	2274
1925/26	1121	1789	360	3270
1926/27	1429	2212	457	4098
1927/28	1814	2768	578	5160
1928/29	2315	3140	753	6208
1929/30	3414	3340	960	7714

TABLE XVIII. GROSS PRODUCTION OF THE NATIONAL ECONOMY OF THE SOVIET UNION.[1]

(in billion roubles at pre-war prices.)

Years	All Industry	Manufacturing Industries	Agriculture	Total Production	Ratio to 1913		
					Industry	Agriculture	TOTAL
1913	8.43	6.99	11.61	20.04	100.0	100.0	100.0
1914	8.43	6.43	11.36	19.79	100.0	97.8	98.8
1915	8.66	7.06	11.75	20.41	102.7	101.2	101.8
1916	9.22	7.42	11.50	20.72	109.5	99.0	103.4
1917	6.38	4.78	10.72	17.10	75.7	92.3	85.3
1918	3.66	2.16	10.62	14.28	43.4	91.5	71.3
1919	1.95	0.95	8.86	10.81	23.1	76.3	53.9
1920	1.72	0.82	8.00	9.72	20.4	68.9	48.5
1920/21	2.08	1.08	7.42	9.50	24.7	63.9	47.4
1921/22	2.54	1.44	6.31	8.85	30.1	54.4	44.2
1922/23	3.33	2.13	8.54	11.87	39.5	73.6	59.2
1923/24	4.05	2.59	9.28	13.33	48.0	79.9	66.5
1924/25	5.65	3.96	9.75	15.40	67.0	84.0	76.8
1925/26	7.58	5.72	11.76	19.34	89.9	101.3	96.5
1926/27	8.76	6.72	12.37	21.13	103.9	106.5	105.4
1927/28	10.08	8.14	12.26	22.34	119.6	105.6	115.5
1928/29[2]	11.77	—	12.48	24.25	139.7	107.5	121.0
1929/30[3] Plan	14.55	—	11.40	25.95	172.6	98.3	129.5

[1] Taken from the Five-Year Plan of the Soviet Union, G. T. Grinko, International Publishers, New York, 1930, p. 34.

[2] Figures for 1928-1929 were added by the editor.

[3] Figures for 1929/30 were taken from Control Figures 1929/30, Table 2, pp. 428-31.

CHAPTER V. PRODUCTIVITY OF WORKER.

Closely allied to the problem of employment and unemployment is the question of the productivity of the worker. Data in any detail on the output of Russian workers before the war, did not prove to be available for this report. A small table is quoted, however, which gives an idea of the productivity of pre-war Russian workers.[19] The average productivity of workers in war industries is shown in this table to have increased greatly during the war years. In all other industries it apparently decreased almost equally.

	War Industries		Market and War Industries		Industries producing for regular market	
	Absolute	Percentage of 1913	Absolute	Percentage of 1913	Absolute	Percentage of 1913
	Average workers per day.					
1913	180,589	100	408,983	100	143,347	100
1914	204,066	113	407,743	99.7	143,715	100.2
1915	247,445	137	398,154	97.3	137,189	95.7
1916	300,464	166	391,199	95.3	138,348	96.5
1917	327,967	182	397,794	97.2	147,366	102.8
	Value of annual production. Prices of 1913, in 1000 roubles.					
1913	537,308	100	877,971	100	217,195	100
1914	616,172	114.6	833,668	94.6	223,117	102.7
1915	1,154,232	214.8	824,747	93.9	209,448	96.5
1916	1,513,046	281.5	735,901	83.8	183,169	84.3
1917	1,544,196	287.2	490,716	55.8	138,314	63.3
	Value of annual production per worker in roubles.					
1913	2,975	100	2,147	100	1,515	100
1914	2,019	101.4	2,044	95.2	1,552	102.4
1915	4,664	160.1	2,070	96.4	1,527	100.7
1916	5,135	179.3	1,881	87.6	1,324	87.4
1917	4,709	158.2	1,234	57.4	939	61.9

The average output of Soviet workers for the principal branches of large scale industry between 1923/24 and 1929/30, the years most immediately relating to the question, is shown in the following series:

[19] Taken from Zagorsky S. O., State Control of Industry in Russia during the War, pp. 67-68.

1. The average yearly production worker in value of output, 1923/24—1929/30, in pre-war roubles (1913 value).
(See accompanying series Table XIX and Chart IV.)

The 1929/30 figures are planned figures only. Total average production is shown to increase between 1923/24 and 1928/29 by nearly 100 percent as measured in 1913 roubles; from 1624 roubles a year to 3089 roubles a year in 1913 producers' prices. In the various categories rates of increase, very naturally, vary.

If one may compare the figures from the two sources, the rate of decrease in productivity between 1913 and 1923/24 and the total increase between 1913 and 1928/29 is significant. By weighting the value of output per worker by the number of workers in each group, in 1913, an average annual output for all workers is obtainable, 2,231 roubles. By 1923/24 that value had dropped, therefore, to less than 73 percent of the 1913 level. Undoubtedly it had been lower. By 1928/29 it had risen to 138 percent of 1913.

The question of productivity in Soviet Russia is an important one. From the point of view of unemployment the rate of increase in productivity, rather than the amount of productivity at any given time, is probably the more crucial, since unemployment in a developing and shifting technology represents in part a lag in adjustment and utilization of the existing labor supply. The degree of success in Soviet Russia in handling her unemployment problem, therefore, under conditions of increasing productivity, as shown in these figures, is itself a comment on the effectiveness of the training and rehabilitation of the labor forces.

It must be remembered, none the less, that the productivity of the Russian worker has never at any time yet approached the level attained by American workmen. Poorer machinery and less developed techniques, less efficient organization of work and management, routing operations and materials for example, or studied and standardized proceedings and operations, have given less effective support to workers' energies. Lower standards of living, less nourishing and energizing food habits and, in pre-

war Russia, longer hours of work, have probably given less energy with which to work. In the years immediately after the revolution, new methods of factory discipline and of factory management, as well as the disorganization and destruction of factories and machinery attendant upon the war and revolution, including the civil war and intervention, all of the factors indeed which complicated the industrial situation in the post-revolutionary years brought the level of workers' productivity to a very low point. New machinery, rationalization, reorganization of management and control, the five-day week, plus all the incentives to work, which have been employed, are bringing about at present a rapid increase in productivity levels. The saturation point, however, if such a point is possible or to be expected, is far from reached. The following table quoted from

Lines of Industry	Pace of the growth of productivity of of labor	Most important factors in the growth of the productivity of labor
Anthracite	+20.5 %	1. Increase of the mechanical process for obtaining raw material by 16 %, 2. Increase of delivery by mechanical means. 3. Number of organization improvements.
Machine construction	+21.9 %	1. Growth of supply to factories. 2. Specialization of production. 3. Introduction of new equipment and organization of a conveying system. 4. Improvement of the inter-corporative and corporative planning of work.
Textile	+19.7 %	1. Concentration of work. 2. Better utilization of machines. 3. Organization methods (output per person)
Basic chemical	+28.5 %	1. Utilization of new equipment. 2. Increase of supply.
Rubber	+37.6 %	1. Shortening of working day. 2. Change of assortments. 3. Introduction of new equipment.
Match	+31.9 %	1. Operating of new factories.
Electrotechnical	+33.4 %	1. Increase of supply. 2. Improving the quality of working staff. 3. Introduction of new equipment.

the Control Figures for 1929/30 gives the reasons assigned to various specific increases in 1928/29.[20]

It is interesting to note that industrial production rose between 1913 and 1928/29 by 39 percent, large scale industrial employment by 17 percent, and that industrial productivity increased by 38 percent.

[20] Control Figures 1929/30, pp. 238-9.

CHART IX
(TABLE III)

AVERAGE YEARLY PRODUCTION PER WORKER, PRE-WAR RUSSIA AND U.S.S.R.

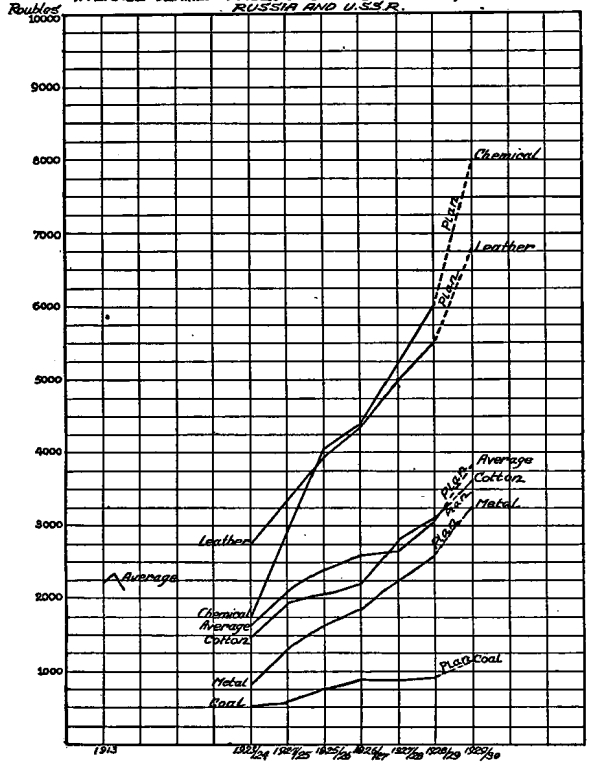


TABLE XIX. PRODUCTIVITY SERIES, 1.

AVERAGE YEARLY PRODUCTION PER WORKER U.S.S.R.

In Roubles, Producers' Prices of 1931.[1]

Years 1923/24 to 1926/27 compiled from Control Figures 1926/27, pp. 324-5; years 1927/28 to 1929/30 compiled from Control Figures 1929/30, p. 504.

	Census Industry				Planned National Economy		
	1923/24	1924/25	1925/26	1926/27 Plan	1927/28	1928/29	1929/30 Plan
Coal	518.3	556.0	747.9	864.0	842.3	911.8	1,127.0
Oil — unrefined[2]	7,563.0	8,655.5	9,625.6	10,277.2	5,886.9	7,650.4	9,578.3
Peat					643.6	647.3	789.4
Mining					971.9	988.5	1,294.5
Mining of Ore					867.7	861.5	1,076.7
Metal	789.6	1,339.8	1,608.1	1,842.7	2,220.9	2,600.6	3,297.7
Electrical Mfg.					3,235.9	4,112.5	5,486.9
Building Materials					1,186.2	1,396.7	1,831.4
Cement					1,832.4	2,123.9	2,718.3
Glass	417.9	643.7	646.4	768.9	928.9	1,055.4	1,325.2
Lumber-Woodworking[3]	1,760.2	2,107.3	3,113.4	2,902.7	2,540.4	2,861.4	3,609.9
Chemical A[3]	1,693.2	2,830.0	4,018.5	4,387.7	5,186.7	6,034.8	8,033.2
Chemical B					4,493.2	4,841.2	6,525.9
Rubber[3]	4,193.9	6,493.3	6,266.3	6,570.8	3,917.0	4,332.4	6,043.5
Matches	639.3	702.9	731.7	784.8			
Textile					2,681.5	3,035.2	3,637.9
Cotton	1,435.3	1,924.2	2,016.6	2,179.3	2,753.6	3,078.3	3,665.4
Wool	1,912.5	2,711,9	3,019.9	3,464.0	4,241.7	5,000.0	5,851.6
Linen					1,274.3	1,458.5	1,818.4
Machine sewn Goods					3,725.1	4,940.3	6,387.4
Leather and Shoe	2,742.4	3,387.2	3,974.0	4,365.9	5,001.5	5,515.0	6,783.7
China and Porcelaine					1,019.7	1,186.7	1,460.5
Paper					2,761.9	3,385.8	4,004.1
Polygraphic					1,426.8	1,650.4	1,904.5
Alimentary					5,456.4	5,928.9	7,019.1
Salt	900.0	1,389.8	1,485.7	1,563.4	1,929.4	2,163.9	2,748.9
Others	2,018.7	2,771.9	3,143.6	3,207.0	3,914.7	4,044.7	4,518.1
AVERAGE for all	1,624.1	2,144.3	2,393.6	2,575.4	2,691.9	3,089.7	3,862.0

[1] Figures for 1923/24 to 1926/27 are given by Control Figures in Producers' Prices of 1913. Figures for 1927/28 to 1929/30 are given by Control Figures in Producers' Prices of 1926/27 and here have been adjusted to 1913 prices by application of index of Producers' Prices for 1926/27.

[2] Decrease and low figure unexplained.

[3] Includes a. Basic Chemical; b. Aniline; c. Laquer; d. Chemical-Pharmaceutic; e. Wood chemical.

CHAPTER VI. WAGES.

The relation between employment, productivity and wages has become increasingly apparent in all countries with the experience of the present depression. Especially where standards of living are comparatively level among large groups of the population and where production, particularly industrial production, expects to find the largest part of its market in the supplying of goods to the workers themselves, the relation between the workers' consumptive power and their power to produce has been the subject of much discussion. Greatly developed productivity in recent years, occuring through technological changes, rationalization and scientific management, particularly in the field of mass production, has been recognized by an ever growing number of persons as requiring new and higher wage levels, if the necessary new markets are to be reached and maintained.

Moreover, in Soviet Russia the development of wages and standards of living marks the crucial point in the growth of her new economy. The primary purpose of socialism, both in theory and practice, has been to increase the standards of life among the working masses of the people. Soviet policy has been explicit in this regard.

The rise or fall of wage levels and standards of living for the masses, therefore, by her own standards, must be the first and fundamental test of Soviet economy. But that test must be applied not simply to specific moments or periods, but to the long time trend. Both because of the newly awakened interest in wage and productivity levels and their influence upon employment, and because also of the importance of wage trends in Soviet Economy, the record of wages paid in pre-war and Soviet Russia is peculiarly significant.

Data concerning wages are submitted in two series: [21]

1. Average monthly wages of workers in Census Industry, principal categories, 1913, 1923/24—1928/29;

   a) in nominal wage

[21] Series (1) and (2) are taken from tables in the Control Figures 1926/27 and 1929/30.

b) in real wage based on the cost of living in 1913. [22]

2. Average yearly wages of all employed persons, principal categories, 1922/23—1929/30, estimated realized figures for the year 1929/30 covering one quarter only;
   a) in nominal wage
   b) in real wage based on the cost of living in 1913. [22]
   (See accompanying series Tables XX-XXIV and Chart V.)

The cost of living indexes for the year 1921 to 1930 reported by the International Labour Review based on 1914 are included for comparative purposes. (Table XXIV.)

The first wage series (1a and 1b) show the drop between 1913 and 1923/24 which the figures on production and productivity would lead one to expect. Data given in the International Labor Review show that the drop in the post-revolutionary and civil war years was even greater, in comparison to 1913, than that of 1923/24, already within the reconstruction period. The fall of the average real wage from 25 roubles a month in 1913 to 16 roubles a month in 1923/24, an even greater drop, to less than seven roubles a month in 1920, is eloquent testimony, again, to the difficulties of the civil war period. [23]

A further study of the figures shows, however, the continued rise in wage levels between 1923/24 and 1929/30. By the year 1928/29 the average nominal wage had reached 73 roubles a month, the real wage 35 roubles a month. The increase in real wages had been from 4 percent to 20 percent a year, and 108 percent for the period.

The average real wage in 1928/29 was 40 percent above the 1913 level. A study of the various categories reveals also different rates of increase among different branches of industry. Real wages for oil workers in 1928/29 were 33 percent above the 1913 level, for metal workers 36 percent, for textile workers 69 percent and for food workers 154 percent. Coal alone shows a decrease. On the whole the wages which were highest in

[22] See Appendix for a discussion of the cost of living index used for calculating real wages.

[23] Volume 10, No. 5, p. 804, volume 13, No. 5, pp. 684-716.

1913, those of metal workers, wood workers, polygraphic and leather workers, were highest still in 1929/30. Those which were lowest in 1913, in textiles and matches, were lowest, also, in 1929/30. But the percent of increase in the lower paid industries is greater than in the better paid, showing a levelling tendency in wages paid, although skilled and important work earns higher wages throughout than less skilled or less important. Two great exceptions appear in coal and the food industries. The real wages of coal miners, according to these figures, were actually lower in 1928/29 than in 1913. Highest paid workers in this case became among the lowest paid. In the food industries the opposite has occurred. (Tables XXI.)

A comparison between the increase in real wages and the increase in productivity shows an almost equivalent increase in the average rates. Workers producing 38 percent more goods a year in 1928/29 than in 1913 were receiving 40 percent more wages a month. That comparison alone is worth study by all economists. (Tables XIX and XXI.)

Any discussion of wages in Soviet Russia must bear in mind the fact that the money wages paid for work done is not the complete record of the workers' available income. A large number of services are rendered by the state which, in effect, increase the wage by a considerable percentage.

Various kinds of insurance, low rents from municipal houses, educational stipends and the like, are reckoned as increasing the actual wage from ten to twenty five percent. Thus a recent discussion of wage levels, which described the average monthly wage of industrial workers for the year 1928/29 as 125 percent above the pre-war rate in "a purely monetary expression", considered it as 136.5 percent above the pre-war rate, if one included the increase in cultural and social services rendered. [24]

But a discussion of certain of these services will be considered under standards of living.

[24] G. V. Tsybulsky, in "Wages during the period from 1927-1929" (translation), Voprosy Truda, May 1930, No. 5, pp. 8-18.

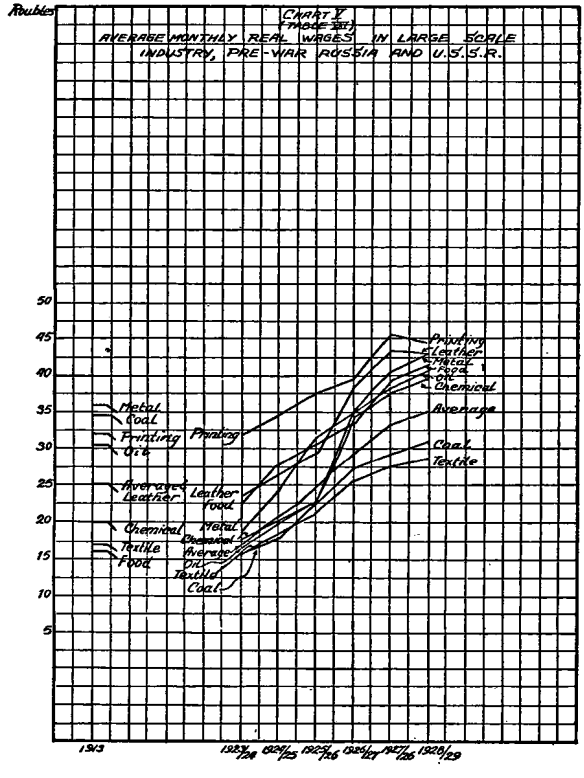


CHART V.
(PAGE 381)
AVERAGE MONTHLY REAL WAGES IN LARGE SCALE INDUSTRY, PRE-WAR RUSSIA AND U.S.S.R.
Roubles
50
45
40
35
30
25
20
15
10
5
Metal
Coal
Printing
Oil
Averages
Leather
Chemical
Textile
Food
Printing
Leather
Food
Metal
Chemical
Average
Oil
Textile
Coal
1913
1923/24
1924/25
1925/26
1926/27
1927/28
1928/29

TABLE XX. WAGES SERIES 1a.

AVERAGE MONTHLY WAGES IN LARGE SCALE INDUSTRY.

Pre-war Russia and U. S. S. R.
In Currency of Corresponding Year.

Years 1913 and 1923/24 to 1925/26 compiled from Control Figures 1926/27 pp. 90-91; years 1927/28 and 1928/29 compiled from Voprosy Truda, May 1930, p. 8.
Control Figures 1925/26, pp. 90-91. Voprosy Truda, No. 5 1930, p. 8.

	1913	1923/1924	1924/1925	1925/1926 Plan	1926/1927	1927/1928	1928/1929
Mining	33.0	32.8	36.8	45.1[1]			
Coal	34.4	32.5	36.1	43.1	56.0	59.5	65.1
Naphtha	30.5	33.9	40.8	45.1	70.8	77.8	85.4
Metal	35.4	39.4	48.7	57.7	70.9	80.6	89.9
Textile	17.0	32.1	36.4	40.8	51.4	55.9	60.4
Cotton	17.3	33.0	37.4	41.8	52.9	57.0	61.7
Chemical	20.0	35.9	41.1	43.1	69.0	77.0	83.0
Match	14.3[2]	25.5	28.8	31.8			
Rubber	30.0	55.2	68.0	71.0			
Alimentary-Food	16.0	46.9	55.1	58.1	68.9	79.3	86.7
Wood-working	22.0	45.6	44.1	47.1	56.4	62.9	69.5
Paper	18.0	36.6	39.9	42.9	55.2	61.8	71.4
Polygraphic-Printing	32.0	66.7	69.2	72.2	79.9	90.3	94.2
Leather	25.0	48.3	54.0	57.0	78.2	86.5	89.6
Machine-sewing		41.0	54.0	57.0			
AVERAGE in Nominal Roubles	25.0	35.2	41.5	48.0[3]	60.4	66.9	73.4

[1] In Mining are included ore workers, which increases the average wage in mining.
[2] Estimated.
[3] Includes allowance of 3 roubles for rent.

TABLE XXI. WAGES SERIES 1b.

AVERAGE MONTHLY REAL WAGES IN LARGE SCALE INDUSTRY.

Pre-war Russia and U. S. S. R.
In Roubles

Years 1913 and 1923 to 1925/26 compiled from Control Figures 1926/27, pp. 90-91; years 1927/28 and 1928/29 compiled from Voprosy Truda, May 1930, p. 8.

	1913	1923/1924	1924/1925	1925/1926	1926/1927	1927/1928	1928/1929	% 1925/26 to 1913
Mining	33.0	15.7	18.4	23.5				
Coal	34.4	15.5	18.0	22.4	27.7	29.8	31.0	90.3
Naphtha	30.5	16.2	20.4	23.5	35.0	38.9	40.7	133.4
Metal	35.4	18.8	24.3	31.1	35.0	40.3	42.9	136.0
Textile	17.0	15.3	18.2	21.3	25.4	28.0	28.8	169.2
Cotton	17.3	15.8	18.7	21.8	26.1	28.5	29.4	170.0
Chemical	20.0	17.1	20.5	22.4	34.1	38.5	39.6	198.0
Match	14.3	12.2	14.4	16.6				
Rubber	30.0	26.3	33.9	37.0				
Alimentary-Food	16.0	22.4	27.5	30.3	34.0	39.7	41.3	254.1
Wood Working	22.0	21.8	22.0	24.5	27.9	31.5	33.1	150.5
Paper	18.0	17.5	19.9	22.3	27.3	30.9	34.0	189.0
Polygraphic Printing	32.0	31.8	34.5	37.6	39.5	45.2	44.9	140.3
Leather	25.0	23.1	26.9	29.7	38.6	43.3	42.7	171.0
Machine Sewing		19.6	26.9	29.7				
AVERAGE	25.0	16.8	20.7	25.0	29.8	33.4	35.0	140.0
Cost of Living Index applied, 1913 = 100		209.5	200.4	192.0	202.5	199.9	209.7	

TABLE XXII. WAGES SERIES 2a.

AVERAGE YEARLY NOMINAL WAGES OF EMPLOYED PERSONS FOR PRINCIPAL CATEGORIES, U. S. S. R.

In Roubles.

Years 1922/23 to 1924/25 compiled from Control Figures 1926/27, pp. 376-7; years 1925/26 to 1929/30 compiled from Control Figures 1929/30, pp. 487-9. Year 1930 compiled from The Economic System of the U. S. S. R. and Control Figures 1931, pp. 268-9.

	1922/ 1923	1923/ 1924	1924/ 1925	1925/ 1926	1926/ 1927	1927/ 1928	1928/ 1929	1929/ 1930 plan	1930
Industry	249	455	564	575	750	821	892	972	1011
Census	253	462	571	701	778	847	925	1008	1032
Non-Census	232	423	525	505	561	628	628	669	795
Construction	232	423	525	825	911	943	1012	1063	1082
Communication	247	390	496	614	712	759	830	886	799
Transportation	161	376	522						
Railroad	155	379	520	692	770	821	881	944	1002
Water	162	344	514	707	799	893	964	1027	1151
Local	207	377	535	741	782	828	903	966	1034
Commerce and Credit	284	653	714	614	749	762	795	803	884[1] 1085[2]
Rural Workers Agriculture and Forestry	107	203	223	256	274	306	336	362	495
Average of TOTAL	180	355	468	571	624	681	738	797	879

[1] Commerce. [2] Credit

Data compiled by U. S. S. R. for the calendar year 1930 to compare with the new fiscal year beginning January 1, 1931.

TABLE XXIII. WAGES SERIES 2b.

AVERAGE YEARLY REAL WAGES OF EMPLOYED PERSONS FOR PRINCIPAL CATEGORIES U. S. S. R.

In Roubles.

Years 1923/24 to 1924/25 compiled from Control Figures 1926/27, pp. 376-7; years 1925/26 to 1929/30 compiled from Control Figures 1929/30, pp. 487-9. Fourth quarter 1929/30, compiled from Planned, Economy, p. 343.

	1923/ 1924	1924/ 1925	1925/ 1926	1926/ 1927	1927/ 1928	1928/ 1929	1929/ 1930 Plan	1929/1930 IV Quarter
Industry	217.7	281.4	299.5	370.4	410.7	425.2	475.3	126.2
Census	220.5	284.9	365.1	384.2	423.7	441.1	492.9	129.1
Non-census	201.9	262.0	263.0	277.0	314.2	299.5	327.1	97.8
Construction	201.9	262.0	429.7	449.9	471.7	482.6	519.8	137.4
Communication	186.2	247.5	319.8	351.6	379.7	395.8	433.3	121.3
Transportation	179.5	260.5	—	—	—	—	—	—
Railroad	180.9	259.5	360.4	380.2	410.7	420.1	461.6	124.2
Water	164.2	257.0	363.0	394.6	446.7	459.7	502.2	151.6
Local	180.0	267.0	385.9	386.2	414.7	430.6	472.4	132.5
Commerce and credit	311.7	356.3	319.5	369.9	381.2	379.1	392.6	109.5 (commerce) 135.0 (credit)
Rural workers Agriculture & Forestry	96.9	111.3	133.3	135.3	153.1	160.2	177.0	—
TOTAL Average	169.5	233.5	297.4	308.1	340.7	351.9	389.7	119.3
Cost of Living Index applied 1913=100	109.5	200.4	192.0	202.5	199.9	209.7	204.5	204.5

The real wage for the year 1930 could not be estimated because no cost of living index was available.

TABLE XXIV. PRICE INDEXES, U. S. S. R.

Compiled from the International Labour Review, Statistics on Prices, published monthly, January 1924.

	1924		1925		1926	
	Wholesale Price index 1913=100	Cost of Living Index 1923 = 100	Wholesale Price Index 1913 = 100	Cost of Living Index 1913/14=100	Wholesale Price Index 1913 = 100	Cost of Living Index 1913/14 =100
January	181	209	178		190	220
February	171	206	—		194	225
March	161	209	—	226	—	229
April	157	213	197	226	197	239
May	165	206	191	223	190	233
June	169	207	188	219	183	227
July	175	212	175	221	182	228
August	173	—	173	217	180	222
September	164	220	173	227	179	220
October	164	—	174			224
November	168	220	175			225
December	172	223	183			223

	1927		1928		1929	
	Food Price Index 1913 = 100	Cost of Living Index 1913/14=100	Food Price Index 1917 = 100	Cost of Living Index 1913/14=100	Food Price Index 1913 = 100	Cost of Living Index 1913/14 =100
January		210	208	205	212	210
February	208	209	206	203	217	214
March	199	202	205	203	222	218
April	201	203	210	206	236	228
May	198	199	211	206	241	230
June	200	199	218	206	240	229
July	201	199	218	210		232
August	199	198	212	207		231
September	200	199	208	201		236
October	208	202	213	204		—
November	208	205	219	209		218
December	209	205	220	209		219

	1930 Cost of Living Index 1913/14 = 100	Index Number Prices Russia and U. S. S. R. 1917—1924 1930 = 1	
January	221	1917	2.94
February	224	1918	20.8
March	221	1919	164
April	222	1920	2,420
May	225	1921	16,800
June	227	1922	288,000
		1923	21,240,000
		1924	4,457,000,000

CHAPTER VII. STANDARDS OF LIVING.

No subject is more difficult to measure conclusively than standards of living, either in comparison between one country and another, or within one country between different periods. Moreover, in Soviet Russia standards of living are an important subject. In pre-war Russia they were admittedly low. In Soviet Russia throughout the years of revolution and civil war they were, by all indications, still lower. In the years of reconstruction and at present considerable evidence can be gathered to show that they are steadily improving. Shortages of food and industrial goods bring forth continual charges to the contrary, especially within the last two years. The period of agricultural upheaval through collectivization of the peasant farms and the period of the Five-Year Plan have certainly been difficult.

Continuous series of data on any subject within the field of standards of living are difficult to find, other than the data on production itself and wages already given. Two groups of figures touching both pre-war and Soviet Russia are available, however, which, in conjunction with the production figures, are suggestive. These are:

1. The Marketable Portion of agricultural production, exclusive of peasant turnover, 1913, 1923/24—1929/30, given in producers' prices of 1913.

2. Imports and Exports.
   a) Total Exports from and Imports into Russia and the Soviet Union 1913-1930, exclusive of the years 1915-1920, at prices of each year.
   b) Total Exports and Imports, 1910-1923, at prices of each year.
   c) Major Exports from pre-war Russia and the U. S. S. R., 1913, 1928/29 and 1929/30, at prices of each year.
   d) Russian and Soviet Imports, by commodity groups, 1913, 1928/29 and 1929/30, at prices of each year.
   e) Exports and Imports, by commodity groups 1910—1917. (See accompanying series, Tables XXV-XXX and Chart VI.)

The data on the marketable portion of agricultural production, that is, the part which entered into trade, both domestic and foreign, (as seen in Standard of Living Series 1), show both the drop in the civil war years and early years of reconstruction and the rise in recent years. The increase, especially in the foodstuffs, had not yet in 1928/29 reached the 1913 level. Particularly is that true for the group of grains which for 1928/29 were only worth 360 million pre-war roubles as against 935 million roubles in 1913. Meats, dairy products and eggs, also, were somewhat less, though fowl was more. At first glance it would look as though the quantity of foodstuffs available for home consumption were lower than in 1913, although most of the items were greater than in 1923/24.

A study of the imports and exports, however, through the years, shows that, although the trends have been the same as in all of pre-war Russian and Soviet Economy, the total figures had in no way in 1929/30 reached pre-war levels. If one were to figure the prices on a fixed basis throughout, one would find the volume of foreign trade in 1928/29 only about one half that of 1913 taking into account the difference in area of pre-war and Soviet Russia. (Series 2a, Standards of Living.)

From the point of view of standards of living these figures are significant, because taken in relation to increased production they indicate, necessarily, a rather larger proportional domestic consumption in 1929/30 than ever before. Moreover, a lesser part of the foodstuffs, especially grain, has been exported throughout the period of Soviet Economy than in 1913, and, although the import of foodstuffs also has been less, the part played by food imports has never, except during the war years, compared in size or importance with that of food exports. For example, the marketable portion of grains in 1913 reached 935 million roubles. The export was worth 594 million roubles. leaving approximately 341 million for home consumption. In 1928/29, the last year for which data were available regarding marketable portion of agriculture, grain valued at 360 million roubles (pre-war prices) was marketed, but exports of grain for 1928/29 reached, in pre-war prices, only about 10 million roubles, leaving the supply of grain available for home con-

sumption somewhat above the 1913 level. (Tables XXV and XXVIII.)

In the field of industrial production more striking conclusions might be reached by a study of increased domestic consumption of shoes, glass and building materials. Textiles cannot be included in the group, since the production of textiles, less exports, was in 1929/30 about comparable to that of 1913. On the whole, however, the nature of the goods shortage in Soviet Russia today would seem to be in relation to demand through increased wages and growing standards of life, rather than to habitual consumption at any time; and that would seem to be true in spite of the drain upon the country's resources through the agricultural upheaval and the five-year plan, both of which have lost more in consumers' goods than had been planned upon, the one through the destruction of herds, the other in export of goods necessary to maintain needed imports. Certain classes of consumers unquestionably have felt great restrictions in relation to earlier years, but not the masses of the people during recent years, if the statistics given have been read correctly. Certain commodities, on the other hand, have unquestionably been restricted, and all are short of the demand.

Additional suggestive data are included in two tables (XXXI and XXXII) giving the growth of all forms of social insurance in the years between 1925/26 and 1929/30. Earlier data covering the subject were not available to the writers. It may be categorically stated, however, that no such number of persons had the advantage of these various forms of insurance or received comparable benefits in earlier years, even though certain paternalistic attitudes may have remained from serfdom.

Two tables (XXXIII and XXXIV), also, are included which give information on housing construction and housing area for the years from 1924/25 to 1929/30. Comparable figures for this also were not obtainable for earlier years. Socialized, i. e. government and cooperative housing construction, is seen to increase from 121 million roubles in 1924/25 to 430 million roubles in 1928/29 and 673 million roubles to have been planned for 1929/30.[25] The area occupied per person, however, increases

[25] Prices of each year.

very little. Figures for the year 1926 as compared with the years 1927/28 to 1929/30 also amounted to very nearly the same, as the following statement shows: [25]

THE UTILIZATION OF HOUSING POLICY, 1926.

	Housing area (in thousand square meters)	Number of persons living on indicated area	Average housing area per 1 person in sq. mets.	From 100 square meters occupied by corresponding social group the space belonged to:		
				government	cooper- & publ.	private sector
Total in U.S.S.R.	141,414.9	24,143,322	5.86	42.2	0.8	57.0
Workmen	39,166.9	7,974,573	4.91	44.9	1.2	53.9
Employees	48,313.0	6,940,936	6.96	59.8	1.0	39.2
Owners	36,551.4	6,693,624	5.46	15.3	0.1	84.6
Other groups	17,383.6	2,534,189	6.86	44.3	0.4	55.3

[25] Yusfin, L. "The Utilization of Housing Policy", Voprosy Truda, May 1930, No. 5, p. 20.

PRE-WAR AND SOVIET RUSSIA

In connection with any housing discussion of pre-war and Soviet Russia, one should make some sort of comparison of rentals. Actual figures are not at hand, but the following comparisons of workers family budgets may be interesting in this connection.

WORKERS FAMILY BUDGET.

In percent to whole.

	1908 Petrograd	1908 Baku	1918-May-November[37] Petrograd	Moscow
Food	48.7	45.2	71.3	72.5
Rent and household	20.7	22.1	3.8	6.7
Clothing	12.1	13.7	6.6	8.3
Heath	3.3	3.3	3.4	3.2
Cultural needs	4.7	3.8	3.1	1.9
Trip to village of birth	2.2	3 3	?	0.6
Other exponses	8.3	8.1	11.8	6.8

	1925 average	1926 average	1927[38] average
Food	43.83	46.89	48.23
Clothing	22.52	19.64	22.57
Rent	5.58	6.84	8.20
Fuel and light	6.71	7.06	7.05
Furniture	2.82	2.75	2.97
Hygiene and medicine	86	95	1.04
Drink and tobacco	3.45	4.00	4.95
Educational supplies	3.87	4.85	4.72
Other	8.36	9.02	6.47

[37] Compiled from Economitcheskaya Zhizn, No. 123, June 8, 1919.

[38] From the Statistical Review, 1927, No. 5, 1928, No. 5, quoted by Turine, S.P., in "Workers' Family Budget Inquiries in Soviet Russia", International Labour Review, volume 20, No. 4, October 1929, p. 572.

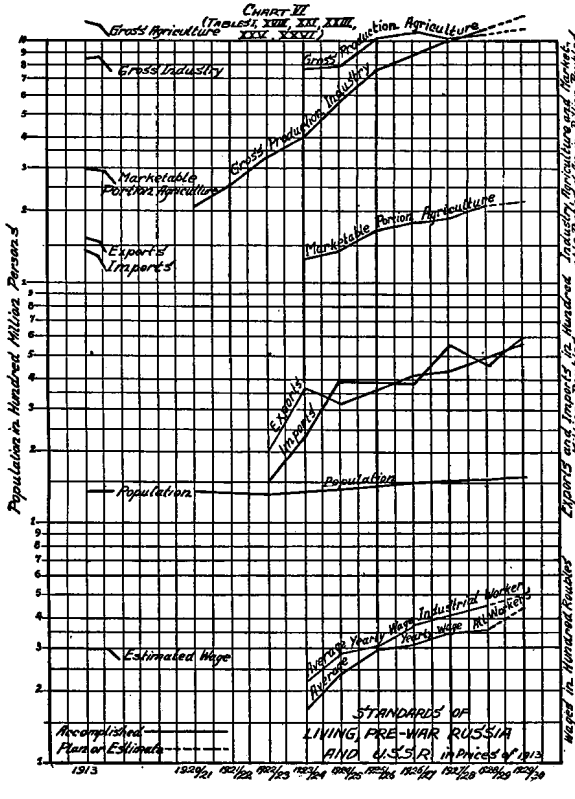


CHART VI
(TABLES I, VIII, XXI, XXIII, XXV, XXVII)
Gross Agriculture
Gross Industry
Gross Production Agriculture
Gross Production Industry
Marketable Portion Agriculture
Exports
Imports
Population
Estimated Wage
Average Yearly Wage Industrial Worker
Average Yearly Wage Rural Worker
Accomplished
Plan or Estimate
STANDARDS OF LIVING, PRE-WAR RUSSIA AND U.S.S.R. in Prices of 1913
Population in Hundred Millions Persons
Exports and Imports in Hundreds of Millions Roubles
Industry, Agriculture and Average Yearly Wage in Billion Roubles
Wages in Hundred Roubles
1913
1922/23
1923/24
1924/25
1925/26
1926/27
1927/28
1928/29
1929/30

TABLE XXV. STANDARDS OF LIVING SERIES 1.

PRODUCTION OF AGRICULTURE, MARKETABLE PORTION, NON-VILLAGE MARKETS, PRE-WAR RUSSIA AND U. S. S. R.

In Million Roubles, Producers' Prices, Prices of 1913[1].

Year 1913, Control Figures 1925/26, pp. 72-3; years 1923/24 and 1924/25 compiled from Control Figures 1926/27, pp. 342-3; years 1925/26 to 1929/30 compiled from Control Figures 1929/30, pp. 540-41.

	1913	1923/24	1924/25	1925/26	1926/27	1927/28	1928/29	1929/30 Plan	Index of 1926/27 used for adjustment to 1913 prices
Grains	935.9	413.1	281.6	394.2	435.1	362.1	360.3	423.2	124.6
Potatoes	68.0	39.5	31.1	38.5	43.1	43.4	57.7	66.4	170.8
Hay and Sown Grass	62.0	52.0	57.4	46.2	46.3	48.6	49.9	52.2	175.7
Other Plant Culture				119.3	135.2	122.6	150.2	167.8	149.3
Vegetable and Fruit	272.3	85.6	99.5						
Ears, Pulp and Straw	21.9	9.7	10.7						
Fibre Plants (Cotton, Flax, Hemp)	283.7	64.5	136.7	188.1	172.2	206.3	243.8	294.7	134.6
Oil-Seeds	115.0	52.7	85.4	122.9	93.6	112.6	116.6	120.4	108.8
Other Technical Cultures	139.6								
Sugar Beets		27.7	31.7	72.6	52.7	84.2	80.8	69.4	134.6
Tobacco		13.3	15.1	26.2	22.1	25.3	19.0	22.4	134.6
Mahorka		3.0	3.3	14.3	15.8	12.7	9.7	9.7	134.6
Meat	424.3	186.5	258.3	258.6	282.6	309.8	380.8	305.9	175.7
Dairy Products and Milk	262.9	129.7	162.1	175.0	175.8	214.1	209.3	231.3	175.7
Fowl	45.6	2.4	16.8	48.7	41.2	45.4	49.5	53.7	175.7
Eggs	82.8	26.1	38.5	47.9	58.0	68.2	62.4	77.4	175.7
Raw Leather and other Raw Products	287.1	80.5	106.9	99.5	112.8	131.5	167.1	157.9	193.2
Others	19.5	23.1	27.5	29.1	29.3	32.5	35.4	37.2	149.3
TOTALS[2]	2958.6	1209.4	1364.6	1689.8	1741.4	1871.1	2050.6	2131.9	149.3

[1] Figures for 1913 to 1924/25 are given by Control Figures in Producers' Prices of 1913. Figures for 1925/26 to 1929/30 are given by Control Figures in Producers' Prices of 1926/27 and have here been adjusted for each product to 1913 prices by application of the index of Producers' Prices for 1926/27. (See Index Numbers given in the last column).

[2] Discrepancy in totals due to application of index numbers.

TABLE XXVI. STANDARDS OF LIVING SERIES 2a.

EXPORTS FROM AND IMPORTS INTO RUSSIA AND THE SOVIET UNION 1913—1930.[1]

Taken from Budish, J. M., and Shipman S. S., Soviet Foreign Trade, New York, 1931, p. 135.

(at Current Prices of each Year.)

Year	Exports (1000 roubles)	Imports (1000 roubles)
1913	1,520,135	1,374,034
1920	1,397	28,469
1921	20,195	208,325
1922	81,621	269,777
1923	205,818	144,056
1923/24	369,187	233,532
1924/25	575,258	723,501
1925/26	676,620	756,332
1926/27	770,543	712,692
1927/28	777,849	945,531
1928/29	877,596	836,303
1929/30	1,002,270	1,068,742

[1] Up to 1916 the trade figures relate to the entire Russian Empire (excluding Finland). For the years 1917-23, apart from the change in boundaries, the statistics include trade only across the European frontier. Statistics for the last seven years are for fiscal years ending September 30 and cover the trade of the U. S. S. R. over all frontiers. The figures are for imports for consumption and domestic export, and the totals exclude bullion and specie. The values for the years 1921 to 1924 were calculated by applying pre-war prices to the quantities and are consequently lower than the real values. Thereafter, they are based on current values on a gold basis. Imports are valued c. i. f. and exports f. o. b. port or frontier. The following sources were used for figures in this table: Commerce Yearbook, 1929, vol. II, p. 566; Statistical Handbook of the U. S. S. R. for 1928 (in Russian), Moscow, Central Statistical Bureau, 1929, p. 713; Soviet Union Year-Book, 1930, p. 296; Trade Information Service, American-Russian Chamber of Commerce, Bulletins 50a to 53a January 1931.

TABLE XXVII. STANDARDS OF LIVING SERIES 2b.

EXPORTS AND IMPORTS PRE-WAR AND SOVIET RUSSIA 1910-1923.

In million roubles.

Years	Exports	Imports
1910	1449.4	1084.4
1911	1591.4	1161.7
1912	1618.8	1171.8
1913	1520.1	1374.0
1914	956.1	1098.0
1915	401.8	1138.6
1916	476.0	1717.0
1917	464.0	1966.0
1918	75.0	261.0
1919	—	82.6
1920	—	—
1921	20.2	232.4
1922	81.6	454.3
1923	205.8	129.1

From 1918 values are given in cherwonetz.
In import figures for 1922 and 1923 food import for famine relief is enclosed as 184.000.000 cherwonetz for 1922 and 35.000.000 cherwonetz for 1923.
The Statistical Handbook for 1928 gives for 1920 the following figures: 1913 roubles Import 28469; Export 1397.

TABLE XXVIII. STANDARDS OF LIVING SERIES 2c.

MAJOR EXPORTS FROM PRE-WAR RUSSIA AND THE U. S. S. R.[1]

Values at Current Prices.

Taken from Budish, J. M., and Shipman, S. S., Soviet Foreign Trade, New York, 1931, p. 139.

Products	1913		1928/29		1929/30		
	in thous. roubles	in % of total	in thous. roubles	in % of total	in thous. roubles	in % of total	in % of 1913
AGRICULTURAL							
Grain	594,501	39.1	18,878	2.2	125,007	12.5	21.0
Oil Cake	38,687	2.5	20,300	2.3	21,585	2.2	55.8
Oil Seeds	35,016	2.3	3,884	0.4	3,025	0.3	8.7
Butter	71,558	4.7	33,713	3.8	10,809	1.07	15.1
Eggs	90,646	6.0	27,763	3.2	10,996	1.09	12.1
Dressed Poultry	7,048	0.5	11,718	1.3	18,607	1.85	264.0
Fish and Fish Products	8,236	0.5	14,211	1.6	15,981	1.59	194.0
Meat Products	9,632	0.6	18,652	2.1	6,790	0.7	70.4
Flax and Tow	94,189	6.2	28,989	3.3	34,436	3.5	36.6
Hemp and Tow	22,870	1.5	3,834	0.4	4,925	0.5	21.5
Bristles	8,871	0.6	6,595	0.8	6,508	0.6	73.4
Casings	2,713	0.2	15,123	1.7	11,506	1.1	424.1
Furs	17,052	1.1	109,119	12.4	83,069	8.3	487.2
INDUSTRIAL							
Lumber and Timber Products	164,982	10.8	137,154	15.6	180,195	18.0	109.3
Oil Products	50,086	3.3	132,614	15.1	157,323	15.7	314.1
Manganese Ore	14,575	1.0	19,059	2.2	15,199	1.5	104.3
Iron Ore	3,047	0.2	5,617	0.6	4,444	0.4	145.8
Asbestos	1,725	0.1	4,587	0.5	4,520	0.5	262.0
Coal and Coke	805	0.1	9,953	1.1	16,985	1.7	2109.9
Cotton Cloth	43,895	2.9	47,589	5.4	48,320	4.8	110.8
GRAND TOTAL including other agricultural and industrial products	1,520,135	100.0	877,596	100.0	1,002,270	100.0	65.9

[1] Figure for 1913 taken from Encyclopedia of Soviet Exports (in Russian) vol 1. pp. 494-7; figures for individual commodities exported in 1928/29 from Saul G. Bron, Soviet Economic Development and American Business, New York, Horace Liveright, 1930, p. 130; for 1929/30 from Economic Review of the Soviet Union, February 1, 1931.

[2] A revised estimate gives 217.3 million roubles.

TABLE XXIX. STANDARDS OF LIVING SERIES 2d.

RUSSIAN AND SOVIET IMPORTS BY COMMODITY GROUPS [1]
1913, 1928-1929 and 1929-30.

In current Prices.

Taken from Budish, J. M., and Shipman, S. S., Soviet Foreign Trade. New York, 1931, pp. 142-3.

Commodity	1913		1928/29		1929/30		Ratio 1929/30 to 1913 (percent)
	1000 roubles	% of total	1000 roubles	% of total	1000 roubles	% of total	
PRODUCERS' GOODS TOTAL	884,428	64.4[3]	719,905	86.7	—	—	—
a) Industrial, transport and electrical equipment	172,358	12.5	206,217	24.6	379,079	35.4	220.3
b) Raw materials	343,111	25.0	345,015	41.6	—	—	—
Cotton	114,041	8.3	131,796	15.9	64,668	6.1	56.7
Wool	60,012	4.4	69,309	8.4	47,904	4.5	79.5
Iron and steel	56,378	4.1	29,364	3.5	61,618	5.8	109.2
Non-ferrous metals	—	—	46,670	5.6	67,103	6.3	—
Hides and skins	25,083	1.8	30,947	3.7	19,627	1.8	78.2
Crude rubber	—[2]	—	9,587	1.2	13,473	1.3	—
Miscellaneous	87,597	6.4	27,342	3.3	—	—	—
c) Semi-manufactures	212,405	15.5	97,682	11.7	—	—	—
Leather	21,204	1.5	8,533	1.0	6,634	0.6	31.2
Paper & cardboard	29,534	2.1	10,990	1.3	10,096	0.9	34.2
Paints and dyes	14,970	1.1	5,739	0.7	6,462	0.6	43.2
Tanning materials	7,719	0.6	8,243	1.0	7,619	0.7	98.7
Miscellaneous	138,942	10.2	64,177	7.7	—	—	—
d) Coal	91,224	6.6	463	0.1	664	0.06	0.7
e) Agricultural machinery & supplies	65,330	4.8	66,454	8.0	—	—	—
Agricultural implements, tractors and parts	49,036	3.6	47,502	5.7	121,545	11.4	248.0
CONSUMERS GOODS TOTAL	391,991	28.5[3]	107,071	12.9	—	—	—
a) Food Products	261,269	19.0	78,939	9.5	—	—	—
Rice	13,083	0.9	13,139	1.6	11,858	1.1	90.6
Tea	62,169	4.5	29,399	3.5	23,390	2.2	37.6
Herring	24,387	1.8	2,514	0.3	7,655	0.7	31.3
Oranges & Lemons	11,093	0.8	4,461	0.5	1,391	0.13	12.5
Sugar	33	0.0	3,886	0.5	29,904[4]	2.8	90,618.2
b) Industrial Consumers' Goods	130,722	9.5	28,132	3.4	—	—	—
TOTAL IMPORT, including non-classified	1,374,034	100.0	836,303	100.0	1,068,742	100.0	77.8

[1] Compiled from the Great Soviet Encyclopaedia (in Russian), Moscow, 1930, and from Trade Information Service, American-Russian Chamber of Commerce, Bull. No. 51a, Jan. 1931; figures for 1929,30 preliminary and totals for main groups not yet available.

[2] Included in "Miscellaneous".

[3] These per entages do not include the non-classified imports.

[4] The unusually large sugar imports in 1929/30 were due to the poor crop of sugar beets in 1929.

TABLE XXX. STANDARDS OF LIVING SERIES 2e.

EXPORT AND IMPORT, PRE-WAR AND SOVIET RUSSIA
in Principal Groups 1910-1917.[1]

In Million Roubles

EXPORTS

Year	Foodstuffs		Raw and semi-manufactured goods		Animal products		Manufactured goods		Total	
	Absol.	%	Absol.	%	Absol.	%	Absol.	%	Absol.	%
1910	933.7	64.4	436.9	30.1	24.0	1.7	54.5	3.8	1427.7	100.0
1911	1017.6	63.9	482.0	30.3	26.4	1.7	65.4	4.1	1591.4	100.0
1912	821.5	54.1	589.0	38.8	31.0	2.0	77.3	5.1	1518.8	100.0
1913	839.9	55.3	561.0	36.9	34.3	2.3	84.9	5.5	1520.1	100.0
1914	523.4	54.8	349.1	36.5	14.5	1.5	69.1	7.2	956.1	100.0
1915	201.7	50.2	144.7	36.0	0.2	0.1	55.2	13.7	401.8	100.0
1916	155.5	32.6	293.1	61.5	0.2	0.1	27.6	5.8	476.4	100.0
1917	51.5	11.1	383.8	82.7	0.0	0.0	28.7	6.2	464.0	100.0

IMPORTS[2]

1910	191.4	17.7	554.4	51.1	10.8	1.0	327.8	30.2	1084.4	100.0
1911	206.9	17.8	553.2	47.6	11.0	1.0	390.6	33.6	1161.7	100.0
1912	209.6	17.9	555.6	47.4	12.0	1.0	394.6	33.7	1171.8	100.0
1913	237.9	17.3	668.0	48.6	17.6	1.3	450.5	32.8	1374.0	100.0
1914	198.2	18.1	520.8	47.4	13.5	1.2	365.5	33.3	1098.0	100.0
1915	179.2	15.7	499.7	43.9	15.2	1.3	444.5	39.1	1138.6	100.0
1916	127.5	9.2	581.8	41.6	0.6	0.0	688.6	49.2	1716.5	100.0
1917	116.2	8.5	510.7	37.2	0.2	0.0	745.7	54.3	1965.8	100.0

[1] The years 1916 and 1917 are only given for merchandise imported and exported through the European frontier including the Black Sea border of the Caucasus as well as the trade with Finland.

[2] The total imports for these years include in the above four groups commodities satisfying State needs, in value of r. 818.000.000 in 1916 andr. 592.961.000 in 1917. The % are taken as relating to a grand total of 1.398.000.000 in 1916 and 1.372.800.000 in 1917, merchandise for State needs not included.

TABLE XXXI.

SOCIAL INSURANCE U. S. S. R.

Years 1925/26 to 1929/30.

Currency, where given, for corresponding year.
Control Figures 1929/30, p. 491.

	1925/26	1926/27	1927/28	1928/29	1929/30 Plan
1. Total number of insured in thousands	8,185.0	9,038.0	9,673.8	10,468.5	11,528.4
2. Average monthly wage of insured in roubles	54.77	59.55	63.99	69.29	74.76
3. Average Insurance tariff (% of total wage fund)	13.40	13.10	12.73	12.54	12.37
4. Number of days of temporary incapacity for work per 100 insured	1,069.7	967.6	987.6	1,012.5	970.0
5. Average yearly number of pension units in thousands	583.7	700.6	848.1	1,006.4	1,112.9
6. Average yearly number of unemployed receiving assistance in thousands	343.6	473.0	657.9	853.7	541.6
7. Average monthly subvention for unemployed in roubles	11.95	12.82	14.13	14.84	15.01
8. Average yearly number of pension units for old age in thousands	—	—	1.0	5.9	21.0
9. Average size of yearly pension for old age in roubles	—	—	—	—	521.3
10. Average sum deducted per one insured for the medical assistance fund in roubles	23.53	25.97	24.87	24.75	27.10

Remark: The figures for 1925/26-1927/28 are calculated from statistics; for 1928/29 according to preliminary execution of the budget; for 1929/30 according to the project worked out by the preliminary commission of the Commissariat.

TABLE XXXII.

SOCIAL INSURANCE BUDGET. EXPENSES. U. S. S. R.

Years 1925/26 to 1929/30
In Million Roubles.

In Currency of Corresponding Years.
Control Figures 1929/30, p. 492.

	1925/26	1926/27	1927/28	1928/29	1929/30 Plan
1. Subventions for temporary incapacity to work	196.8	216.4	244.0	296.6	320.2
2. Subventions to the insured and their families, as a supplementary form of assistance	83.7	81.3	68.4	62.3	60.0
3. Provisions to invalids and families having lost their wage-earner	110.3	157.3	205.1	261.5	310.6
4. Expenses for old age insurance	—	—	—	3.8	11.0
5 Provisions to unemployed	47.8	69.4	113.5	142.3	100.6
6. Organization expenses	27.6	26.7	23.6	23.3	24.0
7. Rest homes and Sanatoriums	31.8	44.6	40.4	36.5	45.3
8. Allotments to medical assistance for the insured	192.6	234.7	246.3	259.5	312.6
9. Deductions into the fund of the workmen's housing construction	25.3	34.2	34.9	39.4	44.8
10. Other expenses	6.4	5.8	7.7	5.9	10.4
11. Reserve	—	0.6	—	30.3	75.0
TOTAL	722.3	871.0	983.9	1,161.4	1,314.3

Remarks: 1. The figures for 1925/26 - 1927/28 are according to statistics, for 1928 29 - according to the preliminary carrying out of the budget. for 1929.30 - according to the project of the Preparatory Commission of the Commissariat.

2. The expenses for old age insurance in 1927/28 are included in the item: "Provisions for Invalids and Families having lost their Wage Earners".

The item: "Real Homes and Sanatoriums" includes not only the current expenses for upkeep but also expenses for capital instruction, repair and equipment.

TABLE XXXIII.

HOUSING CONSTRUCTION U. S. S. R. Years 1927/28 to 1929/30 Control Figures 1929/30, p. 518.						
					In % to previous year	
	Units	1927/1928	1928/1929	1929/1930	1928/1929	1929/1930
I. NEW CONSTRUCTION	million square meters					
socialized sector		2.9	3.3	6.0	113.8	181.8
private sector		2.5	2.7	3.0	108.0	111.1
total		5.4	6.0	9.0	111.1	150.0
II. HOUSING SUPPLY AT END OF YEAR						
socialized sector		75.8	78.3	83.5	103.3	106.6
private sector		84.4	86.2	88.2	102.1	102.3
total		160.2	164.5	171.7	102.7	104.4
III. AVERAGE QUOTA OF AREA PER ONE PERSON	square meters					
socialized sector		5.88	5.80	5.92	98.6	102.1
private sector		5.55	5.53	5.48	99.6	99.1
average		5.70	5.65	5.70	99.1	100.9
IV. COST OF CONSTRUCTION PER 1 SQUARE METER	roubles					
socialized sector		141.0	131.0	113.0	92.9	86.3
private sector		48.0	48.0	48.0	100.0	100.0
V. INVESTMENTS IN NEW CONSTRUCTION million in prices of corresponding year	roubles					
socialized sector		407.2	430.4	673.0	105.7	156.4
private sector		120.0	132.0	145.0	110.0	109.8
total		527.2	562.4	818.0	106.7	145.4

TABLE XXXIV.

CONSTRUCTION OF WORKMEN'S HOUSING-METHODS OF FINANCING, U.S.S.R.

Years 1924/25 to 1926/27
In Million Roubles (Currency of Corresponding years).
Control Figures 1926/27, p. 361.

	1924/1925	1925/1926	1926/1927 Plan
1. Budget U. S. S. R.			
a. Central Cooperative Bank	35.0	80.0	80.0
b. Incoming amounts for paying of advances		2.0	6.0
c. Industry	10.5	18.0	35.0
d. Transportation	4.6	9.2	10.0
2. Local Budget			
a. Executive Comittees	25.3	25.9	34.0
3. Social Insurance			
a. Advances		30.0	
4. Fund for bettering workmen's conditions			
a. Industry	16.9	36.0	38.4
b. Government stores, Syndicates, Stock Companies	0.9	2.0	5.0
c. Banks			10.0
5. Governments Insurance			
a. Deducted from profits	0.5	2.0	2.3
6. Own means			
a. Industry	14.8	11.0	26.6
b. Cooperatives	13.0	6.5	7.5
TOTAL	121.5	216.6	258.8

CHAPTER VIII. CONCLUSION.

The accompanying chart reveals the relationship between the various economic data we have been discussing and the general trends which are apparent throughout. The cataclysmic drop between 1913 and 1923/24 followed by the steady and increasingly rapid rise between 1923/24 and 1929/30 is apparent in production, employment, productivity and wages, both nominal and real. Unemployment coming from so low a figure that it might be counted as negligible in 1921 is seen to be at its height in 1928/29 and in 1930 again sinking into comparative insignificance.

Two points are particularly important for this discussion: first the trends of Russian Economy from pre-war to Soviet, during the seventeen years covered by the data, and second, the apparent trend during the years of 1929 and 1930. Soviet Russia has not only outstripped the pre-war records of Tsarist Russia and within the last three years in industrial production nearly doubled them, but in the last years of world depression has come through apparently with comparatively small loss, continuing, indeed, to new and greater gains.

It was stated at the beginning of the report that in addition to the fact of growth itself, the rate of growth, stability of growth and cost to the population, in hours of work and standards of living were economically the basic questions to be considered. The growth itself can no longer be ignored; the rate of growth is in the history even of industrializing nations extraordinary. The stability seems best illustrated by the depression year. Standards of living are debatable, always, but in the present instance can hardly be considered as other than improved. The average real wage of the industrial worker certainly has been increased and that with the hours of work reduced.

The result of the experience of Soviet Russia with a transition to socialist economy would seem to be primarily twofold; the levelling of distribution and a new control over economic forces. It is not argued that the effects of the world depression, for example, have not been felt there. Most certainly they have been; but not in the crippling of the production processes, nor in unemployment; wages, also, have been maintained and in-

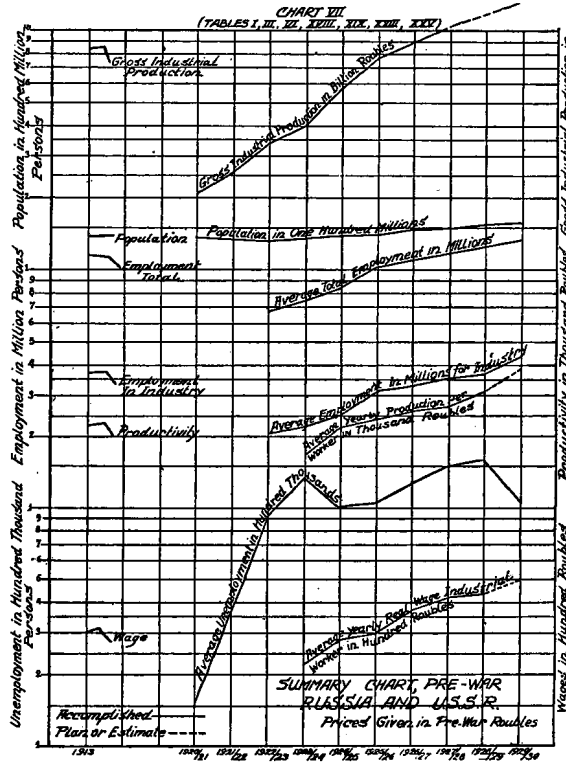


CHART VII
(TABLES I, III, VI, XVIII, XIX, XXIII, XXV)
Gross Industrial Production
Gross Industrial Production in Billion Roubles
Population
Population in One Hundred Millions
Employment Total
Average Total Employment in Millions
Employment in Industry
Average Employment in Millions for Industry
Productivity
Average Yearly Production per Worker in Thousand Roubles
Average Unemployment in Hundred Thousands
Wage
Average yearly Real Wage Industrial Workers in Hundred Roubles
SUMMARY CHART, PRE-WAR
RUSSIA AND U.S.S.R.
Prices Given in Pre-War Roubles
Accomplished
Plan or Estimate
Unemployment in Hundred Thousand Persons
Employment in Million Persons
Population in Hundred Millions Persons
Productivity in Thousand Roubles
Gross Industrial Production in Billion Roubles
Wages in Hundred Roubles
1913
1928/29
1929/30

creased. The effect of the depression has been felt primarily in the lowered prices for raw materials exported to pay for the needed imports. The plan for production has been on the whole maintained. The necessity for a larger than planned exportable surplus, therefore, and a consequent - in part at least - restriction in the domestic supply of goods has been the price paid. The whole population has borne the burden and in comparatively equal shares.

Finally, the relation between production, employment, productivity and wages is worth attention. Production rises with extraordinary rapidity. Employment, productivity and wages all increase at comparable rates, although wage outstripped productivity up to 1925/26, and employment outstripped both till the same time. Thereafter the increase of all three proceeds at nearly the same rate with productivity gaining slightly. On the whole the wage increase has been slightly in advance of the others. The rate of increase in production, of course, is accounted for by the increases in productivity of the worker and in employment.

It has not been the purpose of this report to present a complete picture of the economic development of Soviet Russia as it has come from Tzarist Russia through the revolution and civil war. The picture which does appear, however, even in incomplete data, is one of extraordinary interest and power. A nation has been reborn, but not only that; a new economic system is shown to be developing rapidly at the present time. The record during the last two years of world depression, through which Soviet Russia has passed apparently without diminution in her program of development, brings the program in itself to world attention.

APPENDIX. SOURCES OF DATA.

The data used in the report come from the following sources:

PRIMARY SOURCES. STATISTICAL REPORTS.

1. Control figures, Kontrolnie Tsifri, published by the Central Statistical Administration of the Gosplan (Government Planning Bureau) Moscow, for the years 1925/26, 1926/27, 1927/28, 1928/29, 1929/30.

2. Statistical Yearbook, Statisticheski Ezhegodnik, published by the Central Statistical Administration, R. S. F. S. R. 1921, vol. I. 1918-20; vol. II. 1924, vol. I.

3. Statistical Handbook, Statisticheski Sbornik, 1913-17, published by the Central Statistical Administration, R. S. F. S. R., Moscow 1922.

4. World Economy, Statistical Handbook, Mirovoie Khozaistvo, Statisticheski Sbornik, za 1913-1925. Edited by Prof. N. D. Kondratieff, Publications Department of the People's Commissariat of Finances of the U. S. S. R., Moscow 1926.

5. World Economy, 1913-1921. Statisticheski Ezhegodnik, Edited by Professor S. A. Falkner. In collaboration with V. G. Groman and M. F. Kaufman, all Russian Central Union of Consumers Associations, Moscow 1922.

6. Statistical Handbook U. S. S. R. 1928. Moscow 1929.

7. The Economic System of the U. S. S. R. at the beginning of the Third-Year of the Five-Year Plan and the Control Figures for 1931, Narodnoe Khoziastvo S. S. S. R. i Kontrolnie Tsifri na 1931. Moscow 1931.

PERIODICALS:

1. Planned Economy, Planovoe Khozyaistvo, nos. 6, 10-11, 12. June, October-November, December 1930.

2. Monthly Statistical Bulletin, Ezhemesyachnii Statisticheskii Bulletin, Organ of the Supreme Council of National Economy, No. 85, June 1930.

APPENDIX

3. Voprosi Truda, monthly organ of the Commissariat of Labor, No. 5, May 1930.

SECONDARY SOURCES:

Grinko, G. T. The Five Year Plan of the Soviet Union. International Publishers New York, 1930.

Budish, J. M. and Shipman, Samuel S. Soviet Foreign Trade, Horace Liveright Inc., New York, 1931.

Economic Handbook of the Soviet Union, American Russian Chamber of Commerce, New York, 1931.

Miller, Marguerite, The Economic Development of Russia 1905-1914. P. S. King & Sons, London 1926.

Voytinsky, W. L. Die Welt in Zahlen, Verlag Mosse, Berlin 1926.

Zagorsky, S. O. La République des Soviet, Bilan Economique, Paris 1921.

Zagorsky, S. O. State Control of Industry in Russia during the War. Carnegie Endowment for International Peace, New Haven, 1928.

Köhler, dr. Siegfried. Die Russische Industriearbeiterschaft von 1905-1917. Osteuropa Institut, Breslau. Berlin & Leipzig, 1921.

Soviet Union Trade Delegation, Encyclopedia of Russian Exports, Berlin 1925. Second Edition, Berlin 1930.

It is surprising that as many Russian statistical sources are obtainable in the United States in the original Russian publications as proves to be available. In view of the disorganization which necessarily occurred between 1917 and 1921 it is remarkable, that as much can be found covering those years as proves to be the case. For recent years very much material is available if one is able to use it.

Certain problems arise in dealing with statistical data from Soviet Russia. Both the entire reorganization of statistical bureaus and the rapid development of the new economy has

meant frequent changes of categories in all data especially those covering industrial activity. Necessarily therefore, one must compile in order to procure a series of any length. That, in itself, is cause for inaccuracy. Moreover, it is not easy to discover the regroupings which occur, even though careful notation is very often made in the tables. Finally the difficulty of handling the Russian language and translation is apparent.

THE DATA.

A statement is necessary regarding the Control Figures, since conflicting opinions are apparently current in this country as to their contents. The name "Control Figures" relates to the planned data which appear each year for the following year and constitute the final data presented. The Control Figures 1929/30, therefore contain planned data for the year 1929/30. All other preceding data are statistical in nature, representing actual facts. They are presented as control figures because they constitute the basis for the plan. The data for the year just completed are subject to later revision, since they are in some cases estimates of accomplishment. The Control Figures may be the basis for statistical report therefore, provided one uses the material for previous years in compiling the series.

Revision at the same time means that data as given one year tend not to agree exactly with those given earlier in previous Control Figures. The trends remain always the same. Some deviation, however, usually occurs, a circumstance which confuses the statistician and renders him suspicious of the whole. The tables as prepared by the authors and here presented have attempted to give comparable data from year to year. As a rule the latest figures published have been used for each series. These data for 1929/30 which are not indicated as "plan" came from preliminary estimates of accomplishment reported in Planned Economy in October-November 1930, as indicated.

Confusion arises in making any series from data on Census Industry in the Control Figures of 1925/26 to 1927/28 and from data on Planned National Economy 1928/29 and 1929/30. The

name Planned National Economy refers to government industry only. The series given are therefore conservative for recent years.

Data for the years 1913 to 1923/24 were compiled from various sources as indicated. They were based primarily upon the Statistical Year Book and Statistical Handbook. Where secondary sources were used they were checked either with the originals or with one another. The secondary sources are not on the whole satisfactory for statistical use, since they tend to be fragmentary and vague in the listing of sources used.

EXCERPTS FROM "PLAN FOR STATE STATISTICS OF THE U. S. S. R." 1927-28 BY THE CENTRAL STATISTICAL ADMINISTRATION AND DEPARTMENT (C. S. A.).

The combined plan of the C. S. A. was prepared by the statistical planning commission created by the Council of Labor and Defence of the U. S. S. R. in 1927 in order to correlate the statistical work done by various government departments.
The Commission was entrusted with the preparation of a plan of statistical work for the entire Soviet Union covering the principal statistical undertakings of all union as well as republican character irrespective of the type of organization engaged in the work. The Commission was also to take up the programs and the methods used in gathering statistical materials by the central commissariats as well as by industrial and other enterprises. The Commission was to supervise the work done by the statistical organizations of the various republics and provinces of the U. S. S. R. - as well as of the statistical work in studying the dynamics and the conjuncture of the national economy.

The Commission, on entering upon its work issued a general thesis on the principles of statistical planning. This thesis stated in part:
1. "The responsible work put on the Statistical Planning Commission included working out an All Union plan for statistical work which is based on the idea of unity of the entire state statistics of the U. S. S. R. (Chief Statistical Administration, Departments and Economic Organizations)."

"Up to the present time, much of the statistical data referred only to particular parts of the country while no such statistics existed for other parts of the U. S. S. R., particularly Trans-Caucasia, Central Asia, Kazakastan, etc. The Commission stresses the importance of improving statistical work in the far-off sections of the country."
"The Commission, in stressing the importance of improving agricultural statistics, pointed out that up to 1927 the C. S. A. did not at all take into consideration the state and collective farms and the forestry production."

"In Industry, the so-called non-census enterprises (i. e. those which employ less than 30 workers, without any mechanical power, or 15 workers or less, with mechanical power) have been poorly covered in statistical reports. This applies also to the handicraft producers. Particularly poor were the statistics for construction of dwellings, in industry and in transportation."

"Statistics of population up to 1927 were very deficient. The C. S. A. could not obtain the total figures for the number of births and deaths even in the European part of the U. S. S. R. The Commission calls attention to the necessity of improving these statistics."

"Regarding the All Union census of 1926, the Commission states: 'This census is in reality the first population census since the revolution which really covered the entire territory of the U. S. S. R. and which was conducted with sufficient thoroughness.' The census was primarily demographic-professional."

Industrial Statistics.

"The Statistical Department of the Supreme Economic Council gathers monthly reports of 3500 largest state enterprises. The C. S. A. gathers statistics of the entire census industry, including 16,000 enterprises (in 1927-28) and prepares the index of physical volume of production. For three months the C. S. A. makes a more detailed study of the productivity of labor covering 1000 industrial enterprises. Annually, a study of the entire census industry is conducted. Annually a study of industrial combines (500) is made. An annual study of the petty and handicraft industry covering 190,000 enterprises is made. This applies also to the study of purchasers of industrial products, cooperative industrial organizations, etc. (3000 objects). The C. S. A. also makes a partial study of handicraft cooperatives (from 4-5000). In 1927-28 the C. S. A. was also to complete the study of petty industry on the basis of the 1926 census (up to 5,000,000 blanks).[1]

"The Statistical Department of the Supreme Economic Council,

[1] A thorough census of small scale industry is now under way in the U. S. S. R.

aside from making monthly reports on the principal state enterprises, gathers monthly statistics for wages for 650 trusts and individual enterprises. A monthly study of contracts covering 291 industrial combines and 17 syndicates is also made. Statistics of the financial condition of trusts and syndicates are gathered from 300 combines and 17 syndicates. Quarterly, reports regarding the operations of All Union and republican trusts are gathered from 291 industrial combines. Quarterly reports are received regarding the consumption of fuel and power. Semi-annual reports regarding overhead and expenditures in addition to wages are gathered from 650 combines and individual enterprises with a total of 3000 enterprises."

Statistics of Labor (Summary).

"Statistics of labor are gathered by the C. S. A., the Central Council of Trade Unions, the Commissariat for Labor, the Central Social Insurance Administration, the Commissariat for Transportation, the Commissariat for Post and Telegraph and the Supreme Economic Council. The C. S. A. studies primarily the movement of labor power; the utilization of power and the dynamics of wages for the entire census industry are estimated. The number and the wages of employees in State Offices covering 17,500 offices in provincial towns and 22,100 offices in countries are gathered. Annually, the same statistics are gathered from 364,000 offices and trading establishments. In agriculture and forestry, the C. S. A. estimates the number of peasants working for hire in 79,530 districts. It also makes a study of the conditions of labor of workers engaged in agricultural enterprises, of the cost of living in industrial enterprises, etc.

"The Central Council of Trade Unions makes an annual study of the differentiation of wages of industrial workers. It studies rent, cost of living, collective agreements (95,000 annually), the number of members in trade unions covering 70,000 locals, clubs, libraries, strikes, etc.

"The Commissariat for Labor studies labor exchanges, employment, unemployment, the number of peasants migrating to cities for work, statistics of accidents, health statistics for workers, labor conflicts, etc.

APPENDIX

"The Central Social Insurance Administration studies the work of the 601 social insurance units.

"The various commissariats study the labor power employed in enterprises under their supervision."

Agricultural Statistics.

"The C. S. A. conducts the annual spring census covering 10 percent of the sown area, the animals on the farm, etc. (2,505,200 farms in 1927-8). The fall census covering 478,164 selected farms. A total of 61,782 correspondents report to the C. S. A. annually regarding the general crop and other agricultural conditions. Crop conditions are reported twice monthly during the summer by 30,891 correspondents. A total of 265 questionnaires is collected covering the various special branches of agriculture. Over 60,000 questionnaires cover the question of the supply of feed for animals. The dynamics of agricultural economy are studied in over 100,000 peasant economies. The study of collective farms covered but 30 percent of these farms in 1927-28.

"The budgets of peasant families are studied by the C. S. A. on the basis of reports for one month of 10,000 farms and regular reports of 2,000 farms. Short accounts of revenues and expenditures are given by 10,000 farms. The study of food consumption of the urban and the rural population covers 11,600 families in the cities and 26,115 farms. Other work of the C. S. A. covers forestry etc.

"The Commissariat for Agriculture studies the state measures as regards agriculture (statistics of land organization, struggle against drought, migration, supply of agricultural machinery, etc.) It gathers statistics regarding crop conditions from the meteorological stations of the Commissariat and agronomers."

"Statistics of prices in 1927-1928 were gathered, aside from the C. S. A., by the Conjuncture Institute of the Commissariat for Finance which has been merged with the C. S. A., by the Central Union of Consumers' Cooperatives, by the Supreme Economic Council, the Commissariat for Trade and the Central Union of Trade Unions. The C. S. A. in 1927-1928 was gathering

price statistics regarding the bulk wholesale prices, the small-scale wholesale prices, the urban retail prices, the rural retail prices, and prices paid by state and cooperative procuring agencies. These statistics are gathered from 30 to 1700 different locations and cover from 20 to 120 products. Most of these statistics are gathered once a month.

"The C. S. A. estimates both the wholesale and the retail price indexes. It also covers statistics regarding the prices for many agricultural products such as grain, meat, vegetables, cattle, feed, etc. The Conjuncture Institute in 1927-1928 gathered largely statistics of retail prices which are now being taken care of by the C. S. A."

"The Central Council of Trade Unions makes a study of the cost of living index which covers 33 products of general consumption. In 1927-1928 the cost of living index was collected from 110 provincial and 340 country towns.

"Trade statistics of the C. S. A. include a monthly regional study of state, cooperative and private trade for 25,000 enterprises. A study of 50,000 trading establishments is conducted annually on the basis of accountants' reports. A complete annual study of 900,000 trading establishments and individual traders (including peddlars, etc.) is conducted annually on the basis of tax inspectors' reports. Quarterly reports regarding stocks of grain and raw material are obtained from 20,000 to 30,000 organizations. The C. S. A. also makes a study of stocks held by the distributing system of industrial production for the market, of overheads in trades, etc."

"Statistics of Circulation. Financial statistics are gathered by the C. S. A. and the Commissariat for Finance. The C. S. A. in 1927-1928 studied 10,000 differentiated local budgets besides making a detailed study of several hundred selected budgets. It also conducts a study of taxation covering 900,000 trading enterprises and individual merchants, 900,000 handicraft producers including individual artisans, and 700,000 income tax payers."

"Social Statistics. Statistics of social composition and the movement of population are largely gathered by the C. S. A.

which in 1927-1928 collected monthly reports for the movement of population for nearly 1,000,000 people and annual reports for eleven and a half million people. It also gathers statistics of migration, both internal and abroad, and estimates the population of the U. S. S. R. at the beginning of the year. The Commissariat for Agriculture studies agricultural migrations through certain migration points.

"Health statistics of the C. S. A. cover the registration of cases of illness (over 30,000,000 cases), reports of the hospital system and a study of the sanitary condition of the U. S. S. R."

"The municipal statistics gathered by the C. S. A. cover a study of construction costs, of permits for construction, of peasant construction, housing cooperatives, etc. Other monthly statistics are gathered by the Commissariat for Internal Affairs.

"Educational statistics of the C. S. A. cover largely a census of the school system with (in 1927-1928) 125,000 schools, 350,000 instructors and 12,000,000 students. The Commissariat for Transportation provides annual statistical information regarding 260,000 educational institutions. The Central Transportation Board of Education gathers statistics regarding 5,000 educational institutions under the control of the transportation system.

"Among other statistics of the C. S. A. are statistics of convictions, suicides, consumption of alcohol, etc. The legal statistics are gathered largely, however, by the Commissariat for Internal Affairs.

"Military statistics are gathered by the C. S. A. (covering conscription and the chief administration of the Red Army)."

APPENDIX. INDEXES USED IN THIS REPORT.

Industrial Production for the years 1925/26 to 1929/30 given in producers' prices of 1926/27 by Control Figures: Adjusted to producers' prices of 1913 by applying the "General industrial index of Government trade sale prices" for 1926/27 (192.8). (See Appendix Table II.)

Agricultural Production, as above: Adjusted to producers' prices of 1913 by applying the "Index of producers' prices on agricultural goods with variable gravities of sectors" for 1926/27 (149.3). (See Appendix Table II.)

Marketable Portion of Agriculture for 1925/26—1929/30 given in producers' prices of 1926/27 by Control Figures: Adjusted to producers' prices of 1913 by applying the "General commercial index of agricultural producers' prices estimated as per marketable portion", various groups of commodities based on the variation of price within each group. (See table on p. 579 of Control Figures 1929/30 for indexes item by item, and Report, Table XXV.)

EXCERPTS FROM STATEMENTS CONCERNING PRICE INDEXES SHOWING METHOD OF CONSTRUCTION OF INDEXES GIVEN IN CONTROL FIGURES, 1929/30, p. 583 AND PRICE INDEXES AND PRICES ON AGRICULTURAL PRODUCTS.

1. The price indexes are constructed according to the method of aggregates. The base is the prices of the three years preceding the war 1919/11, 1912/13 and 1913/14. To form these indexes of planned prices the contemporary prices were furnished by the sub-department of price statistics in the Commissariat of Commerce. The planned supplies through an average period of three years 1925/26—1927/28 provide the weights of products and gravities (importance) of districts. To secure a general trade index of traders' prices, the gravities have been taken from an average period of three years 1925/26—1927/28, according to control figure calculations.

To establish the movement of private traders' prices, material of the Census Administration in regard to market prices and the current rural economy statistics have been used. The prices are calculated in accordance with the gravities of the sectors. Sources for pre-war prices were mostly prices gathered by the Ministry of Agriculture. In view of the fact that the Gosplan considers these prices exaggerated in regard to grains and oilseeds, they have been corrected. Preliminary calculations have established a coefficient of reduction of the pre-war prices on grains by 6 percent. Therefore the levels of the published indexes of the Commissariat of Commerce are higher than those of the usual levels of indexes. At present this coefficient is being made more exact.

APPENDIX TABLE I. PRICES INDEXES (Yearly Average).

Control Figures 1926/27, U.S.S.R., p. 306 (1913 = 100)	1923/24	1924/25	1925/26	1926/27 Plan
A. Index of Producers' Prices				
1. Rural Economy	113.4	137.1	142.0	142.0
2. Industry	172.8	161.9	169.1	169.1
3. Total (Marketable Portion)	142.5	151.2	157.9	158.8
B. Wholesale Price Index of the Gosplan				
1. Rural Economy	134.2	166.9	171.0	171.0
2. Industry	215.7	192.4	201.0	201.0
3. Total (Marketable Portion)	175.1	181.8	189.2	189.8

APPENDIX TABLE II. PRICES INDEXES (Yearly Average).

Control Figures 1929/30 U.S.S.R., p. 426. (1913 = 100)[1]	1925/ 1926	1926/ 1927	1927/ 1928	1928/ 1929	1929/30 Plan
General Industrial Index of Government Trade sale prices (producers' prices)	198.2	192.8	185.3	184.8	180.2
Index of producers' prices on agricultural goods with variable gravities of sectors	158.8	149.3	156.4	183 3	178.8
All-Union wholesale index	192.0	184.7	178.4	182.3	178.8
Budgetary index in full (with variable gravities of sectors)	—	202.5	199.9	209.7	204.5
Including marketable portion	—	212.3	207.5	216.2	209.7

[1] Except the Rural Economy Index, for base of which the average of 1910/11, 1912/13 and 1913/14 was taken.

2. The valuation of the gross production as well as of the marketable portion of rural economy has been made according to producers' prices. For estimating gross production, prices of non-village marketable portion were taken. These prices at which expropriations of agricultural products are made by peasants on the non-village market, are figured as prices calculated from the prices of both socialized (planned and local)

furnishers and those of the private sector. Under expropriations to the private sector are to be understood the sale prices to private traders and to the direct city consumer on city markets. The prices of planned traders are taken according to information furnished by the Commissariat of Commerce, because statistics do not take into account supplying prices of governmental and cooperative traders outside of the plan; for these supplies, prices of planned traders were taken, because the indicated prices for the enumerated years on the whole were not very different from the planned prices. For the valuation of expropriations to the private sector there have, on the whole, been used market prices of the Census Administration, calculated mostly by the year, with consideration of the periods of sales on the private market. In addition prices of the Census Administration for the current agricultural statistics were used, figures which had been calculated by the Census Administration at the instruction of the Gosplan. The average-yearly prices throughout U. S. S. R. are obtained as a result of calculating the average yearly prices of districts according to the weights of the marketable portion of each year, taking into account the weights of the categories of traders in each year (governmental, cooperative and private). Because the former data have been made more accurate, and also because new information had been obtained when making up the control figures for 1929/30, in the valuation of agricultural production and marketable portion according to cycle prices and peasant budget prices, the prices used for the valuation of agricultural production and marketable portion in the control figures for 1929/30 differ from the prices taken in the five-year plan for all indicated years. Aside from this, divergencies in the prices of 1928/29 and 1929/30 may be explained by the five-year plan taking no account of the increase of agricultural prices which took place in 1928/29.

"The weaknesses and the strong points of Soviet statistics are directly traceable to the position in the entire system of national economy of those branches to which these statistics apply. That is, the Soviet statistics for industry or, to be specific, large scale industry, are exact and very detailed, perhaps too detailed from the point of view of the expenditures involved in gathering them for the reason that the 3,500 industrial enterprises under the direct supervision of the Supreme Economic Council are legally obligated to submit statistics on the 5th of every month covering their operations for the previous month."

"The same applies, for instance, to the financial statistics collected by the Commissariat for Finance from the principal Soviet banks the capital of which is owned by the Commissariat and which are therefore directly responsible to the Commissariat in all its operations and its statistical information in particular."

"On the other hand, statistics for agriculture have been in the past quite unreliable. This is due primarily to the fact that none of the 25 million farms to be found in various parts of the country are under any obligation to the Central Statistical Administration to supply information regarding areas sown, yield per acre, crops, number of horses, etc. On the contrary, the Soviet peasants are, perhaps in the majority of instances, afraid of collectors of statistics, for every acre of land sown, every horse and cow is subject to taxation."

"In short, those branches of national economy which have been nationalized to a great extent and the statistical reports of which are used for direct practical and particularly administrative purposes give statistics which are as reliable as, or perhaps more reliable than, those obtainable in the same branches of national economy in other countries."

"On the other hand, agricultural statistics, statistics for handicraft enterprises and others where the individual entrepreneur is not in any way obligated to supply statistical data to the organization

collecting such, are in most cases manifestly poor. The reasons for this are obvious if one remembers the tremendous distances, the absence of good roads, the peculiar climatic conditions, the cultural backwardness and the prejudices, etc., which still prevail in many parts of the Soviet Union."

"The often heard complaints against the statistics collected by the C. S. A. as contrasted with those gathered by the Supreme Economic Council in charge of industry, the Commissariat for Transportation, the Commissariat for Finance or the Commissariat for Trade, can well be explained on these grounds, namely, that the C. S. A. is entrusted with collecting those statistics which are not immediately procurable by the Commissariats in charge of the various branches of national economy of the Soviet Union. The most frequent complaints are, of course, against agricultural statistics. A serious attempt to remedy the situation is now being made with the recent change in Soviet economic policy which tends to devote infinitely more attention to agriculture. It is worth noting that even the statistics for state and collective farms which are always particularly favored by the Soviet authorities were very poor only two or three years ago. It may be expected that within a year these (agricultural) enterprises will be put on a par with industrial establishments reporting to the Supreme Economic Council as regards the statistical information which they will be required to supply."

EXCERPTS FROM CONSTRUCTION OF INDEXES TRANSLATION OF INDEX NUMBERS BY IRVING FISHER PUBLISHED BY THE C. S. A., U. S. S. R. MOSCOW 1928.

Article by A. S. Yanovskii "Russian Indexes, p. 424.

...1913 was taken as a basis in the new index of wholesale prices. The average basic prices were determined mainly by the method of estimates and also by "the summary of commodity prices". In the case of many commodities it was possible to establish a very large number of prices. But in the case of others only the prices on the largest markets were found....

Together with 1913 as a basis another basis, that of April 1924, was introduced in which calculations were made for independent categories (rows) which were usually denoted as indices "at the time of money reform."

The list of commodities of the new index which differed very little from the old ones includes 71 names (items), which are combined into the 17 groups. In addition to these 17 independent group indices 11 summary indices are calculated among which, besides the usual sub-indices - the agricultural and industrial - there are also sub-indices of commodities of personal use and production-technical commodities.

Commodity weights were determined by data of the production for 1922-23 in the following manner: The commodity portion of production was evaluated on the basis of 1913 prices and the total obtained for each industrial commodity was multiplied by the coefficient of the rise in prices toward April 1924 as compared with pre-war days which are determined by the general industrial index of the Supreme Economic Council, while for each agricultural commodity there was a direct evaluation of production on the basis of 1924 prices. Then by the method of estimates the "coefficient of turnover" was determined for each commodity in wholesale trade and by multiplying by this figure it was possible to obtain the wholesale turnover, namely, the commodity weight required.[1] The turnovers obtained by this method were approximately the same amounts for agricultural commodities and industrial commodities (4,399 million rubles

[1] This operation is undoubtedly the weakest spot in the whole system.

for agricultural and 4,574 million rubles for industrial commodities) which came very close to the previously established method [2] of obtaining the general commodity index by the method of simple geometrical means based on the agricultural and industrial sub-indices.

The city weights (volumes) were obtained from the materials of the industrial census of the Central Statistical Administration of 1923 and individual weights are given only for nine large cities while the other cities are combined in the ten regions (rayons) or districts and commodity weights are given for the entire district. Within each region, therefore, an equal weight was given to all cities. The general weight of the largest cities was determined on the basis of the number of trading organizations in various branches of trade and by the number of persons employed therein. On the basis of all data this weight was calculated to be close to 65 percent, and this is introduced into the index-weights.

The calculation of the described indices is made for the 1st, the 11th and the 21st of each month.[3] In addition to this, semi-monthly, semi-quarterly, semi-annual and annual industrial (October—September) and agricultural (July—June) indices are calculated for all commodity groups.

In addition to the All-Union wholesale price indices, calculations are also made of regional indices for the following large regions; the consuming and producing Ukraine with the Crimea, also the Caucasus with the Transcaucasian Republic, and separately the Moscow index. But in the latter in addition to the agricultural, industrial and general commodity indices, only indices for grain and flour are calculated and these contain the commodities of group 1 and group 2 of the All-Union index and other agricultural commodities.

We pointed out above that the authors of the index aimed to create a continuous range of ten-day "gold" indices beginning with August 1. 1922. However, direct calculation would have

[2] This method was established by the inter-departmental index commodity of the Gosplan of the U. S. S. R.

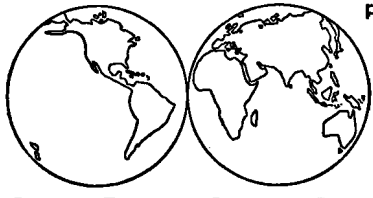
[3] Beginning with May 1928, the system of calculating indices once a month based on the prices of the first of the month was introduced.

been extremely clumsy, hence they resorted to group divisions of the old index and by means of successive division by the latter, the necessary ranges were obtained.

The nomenclature of the first index of the Supreme Economic Council was composed of 70 commodities, combined into 11 groups with 8 sub-divisions.

The year 1913 was used as a basis for the index, and the large-wholesale prices of commodities in that year were determined by the few preserved price lists, handbooks and trade books of the largest pre-war trade and industrial firms; necessary corrections were introduced by a method of estimates because in those days the price lists were intended not so much for buyers as for competitors.

The described index is published monthly in Torg. Prom. Gazeta and in the bulletins of Ts. O. S. of the Supreme Economic Council.



PROGRAMME

OF THE

1 9 3 1

WORLD SOCIAL ECONOMIC CONGRESS

UNDER THE AUSPICES OF THE INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION (I. R. I.)
66 JAVASTRAAT · THE HAGUE · HOLLAND

PLACE: AMSTERDAM - HOLLAND

DATE: AUGUST 23 EVENING TO 29 MORNING

SUBJECT: SOCIAL ECONOMIC PLANNING
THE NECESSITY FOR PLANNED ADJUSTMENT OF PRODUCTIVE CAPACITY AND STANDARDS OF LIVING

PRESIDING OFFICER: C. H. VAN DER LEEUW
PRESIDENT INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION

MEETING PLACE: KOLONIAAL INSTITUUT
AMSTERDAM

SUNDAY

23

20.— OPENING MEETING. REPORT ON CONGRESS PROCEDURE, FOLLOWED BY INFORMAL RECEPTION.

MONDAY

24

I. THE PRESENT PARADOX—UNEMPLOYMENT IN THE MIDST OF ECONOMIC PROGRESS

9.— Address by Dr. F. Wibaut, Member of the Town Council of Amsterdam

9.15 1. THE SIGNIFICANCE OF WORLD-WIDE UNEMPLOYMENT

Speaker: Dr. Max Lazard, Paris

Interpretation of reports on fluctuations in employment and unemployment in various countries, 1910-1930 (Great Britain, France, Australia, U. S. A., Canada, U. S. S. R., China, Germany), printed and available in advance; by Dr. F. C. Benham, London School of Economics and Political Science, formerly lecturer in the University of Sydney, Australia; Dr. W. A. Berridge, Metropolitan Life Insurance Company, U.S.A., and member of Committee on Governmental Labor Statistics of the American Statistical Association; Dr. Susan M. Kingsbury and Dr. Mildred Fairchild, Bryn Mawr College, U.S.A.; L. K. Tao, Director, and S. H. Lin, Institute of Social Research, Peiping, China; and Dr. Robert Wilbrandt, Technische Hochschule, Dresden, Germany.

10.15 2. RECENT GROWTH IN THE WORLD'S PRODUCTIVE CAPACITY.

Speaker: Dr. Otto Neurath, Director, Social Economic Museum, Vienna

11.15 Intermission

11.30 Discussion: Dr. F. C. Benham, London School of Economics and Political Science (University of London); Dr. Robert Wilbrandt, Technische Hochschule, Dresden.

12.45 Adjournment

II. PRINCIPLES AND PRACTICABILITY OF ECONOMIC PLANNING

14.15 1. PRINCIPLES AND PRACTICE OF SCIENTIFIC MANAGEMENT: UNITED STATES

Speaker: Dr. H. S. Person, Managing Director of the Taylor Society, New York; formerly Director of the Amos Tuck School of Administration and Finance, Dartmouth College, U. S. A.

14.45 2. PRINCIPLES AND PRACTICE OF SCIENTIFIC MANAGEMENT: EUROPE

Speaker: Hugo von Haan, International Management Institute, Geneva

15.15 Discussion: Dr. Heinz Ludwig, Member of Board of Directors, Hermann Meyer & Co. A.G., Berlin; Edmond Landauer, Secrétaire Général du Comité International de l'Organisation Scientifique, Paris; Ing. Dr. Stan. Spacek, Ministry of Public Works, Tcechoslovakia; Wallace Clark, Consulting Engineer, New York and Paris; Henri Pauwels, Confédération des Syndicats Chrétiens de Belgique, Bruxelles.

16.15 Intermission

16.30 General Discussion

17.45 Adjournment

TUESDAY

25

9.— 3. THE PROBLEM OF PLANNED ECONOMY

Speaker: Dr. Lewis L. Lorwin, Institute of Economics of the Brookings Institution, Washington, D.C., U.S.A.

9.45 Discussion: Professor J. B. Tayler, M.Sc., Professor of Economics, Yenching University, Peiping, CHINA; Bertrand de Jouvenel, author of "l'Economic Dirigée", Paris; Gerald Barry, Editor, Week-End Review, London.

11.— Intermission

11.15 Continuation of Discussion: Dr. F. Meyer zu Schwabedissen, Partner Bertelsmann & Niemann, Bielefeld, GERMANY

11.40 General Discussion

12.45 Adjournment

III. EXPERIENCE IN NATIONAL ECONOMIC PLANNING:

A. AGRICULTURAL B. INDUSTRIAL

14.15 THE UNION OF SOVIET SOCIALIST REPUBLICS

Speakers: Valery V. Obolensky-Ossinsky, Economist, Member of the Institute for Economic Research of the State Planning Commission (Gosplan); Head of U. S. S. R. Delegation to 1927 World Economic Conference, Geneva

Assisted by: Solomon Ronin, Member of the Institute for Economic Research and Member of the State Planning Commission (Gosplan); Aron Gayster, Vice-President of the Agricultural Academy of the U. S. S. R. and Member of the State Planning Commission (Gosplan); Ivan Kraval, Director of the Labor Research Institute; Alexander Cohn, Director of the Institute for Foreign Trade

TUESDAY (cont'd)

16.— Intermission

16.15 General Discussion

17.45 Adjournment

20.— Continuation of General Discussion

WEDNESDAY

26

IV. NECESSITY AND MEANS FOR INTERNATIONAL ECONOMIC PLANNING

9.— *1. INTERNATIONAL PLANNING BY INDUSTRIES

Speaker: Professor M. Palyi, Economist of the Deutsche Bank und Disconto-Gesellschaft, and Professor at the Handelshochschule, Berlin

9.40 Discussion: Professor Ernest M. Patterson, President, American Academy of Political and Social Science, Philadelphia, U. S. A.; Hugh Quigley, Chief Statistical Officer of the Central Electricity Board, England

10.10 General Discussion

10.45 Intermission

11.— 2. MASS DISTRIBUTION AND HIGHER STANDARDS OF LIVING

Speaker: Edward A. Filene, Wm. Filene's Sons' Co., Boston, U. S. A.

11.30 Discussion: P. J. S. Serrarens, Secretary International Federation of Christian Trade Unions, Utrecht, Holland.

12.— General Discussion

13.15 Adjournment

Afternoon No session

THURSDAY

27

9.— 3. THE FUNCTIONING OF THE INTERNATIONAL FINANCIAL SYSTEM IN THE ECONOMIC WORLD

Speaker: Professor M. Palyi, Economist of the Deutsche Bank und Disconto-Gesellschaft, Berlin

10.— Discussion

11.— Intermission

11.15 General Discussion

12.45 Adjournment

14.15 4. ECONOMIC SERVICE OF THE LEAGUE OF NATIONS

Speaker: Professor Rudolf Broda, President, League for the Organization of Progress, Antioch College. Yellow Springs, Ohio

15.— 5. EXPERIENCE AND POTENTIALITIES IN INTERNATIONAL ECONOMIC TREATIES

Speaker: Professor Joseph P. Chamberlain, Columbia University, New York

15.45 Intermission

16.— Discussion: Dr. Max Lazard, Paris; Hans Mars, Consultant on Scientific Management and Rationalisation of the "Kammer für Arbeiter und Angestellte", Vienna

16.45 General Discussion

17.45 Adjournment

FRIDAY
28

V. STANDARDS OF LIVING—THE RESULTANT OF PRODUCTIVE CAPACITY AND BUYING POWER

9.— 1. INTERNATIONAL AGREEMENT ON LABOR STANDARDS

Speaker: Albert Thomas, Director International Labor Organization, Geneva

10.— 2. THE ECONOMIC POLICY OF THE INTERNATIONAL LABOR MOVEMENT

Speaker: F. Naphtali, Director of Economic Research or Trade Unions, Member of National Economic Council, Berlin

10.45 Intermission

11.— Discussion: Dr. Frieda Wunderlich, Economist, Member of the "Preussischen Landtag", Editor of "Soziale Praxis", Berlin; Dr. M. G. Levenbach, Lecturer in Labor Law, University of Amsterdam.

12.45 Adjournment

VI. ROUND TABLE CONFERENCE ON THE WORKSHOP

Chairman: Prof. Dr. Goetz Briefs, Director of Institute for Industrial Sociology and Social Science, Technische Hochschule, Berlin

14.15 1. FIRST SESSION

Starting point of discussion—the Industrial Employment Code in process of formulation by a committee of the Taylor Society, New York. Discussion opened by Morris L. Cooke, consulting engineer, Member Power Commission of New York State; formerly Director of Public Works of the City of Philadelphia, U. S. A.

F R I D A Y (cont'd)

Paper read by title: Human Relations in the Electrical Industry in the United States and Canada by H. H. Broach, President, International Brotherhood of Electrical Workers, Washington D.C., U. S. A.

15.45 Intermission

16.— 2. SECOND SESSION

Subject: The Workshop as a Unit in Planning under Different National Systems

17.45 Adjournment

20.15 **VII.** THE NECESSITY FOR WORLD SOCIAL ECONOMIC PLANNING

Speaker: Mary van Kleeck, Director Industrial Studies, Russell Sage Foundation, New York; Vice-President I. R. I.; Chairman of Congress Programme Committee.

This Report has been printed by the firm of "De Eendracht", Schiedam, Holland, where the principle of cooperation between workers (including management) and customers is given practical effect. Capital is intended to serve Labour and its remuneration is limited to 6% or 7%. All further profit goes to the workers and to the customers, who possess 99% of the shares. The business has been established since 1897 and its affairs are conducted to the entire satisfaction of all concerned.

RATIONAL ORGANIZATION AND INDUSTRIAL RELATIONS

A SYMPOSIUM OF VIEWS FROM MANAGEMENT, LABOUR AND THE SOCIAL SCIENCES

CONTRIBUTED TO THE 1929 I.R.I. DISCUSSION MEETING, ON THE SUBJECT OF HUMAN RELATIONS IN A RATIONALLY ORGANIZED INDUSTRY

PUBLISHED BY THE INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION - M. L. FLEDDÉRUS, EDITOR

TO BE OBTAINED FROM THE SECRETARIAT OF THE ASSOCIATION
JAVASTRAAT 66, THE HAGUE, HOLLAND
PRICE H.FI. 3.50, POST FREE
FOR MEMBERS OF THE ASSOCIATION H.FI. 2.50, POST FREE

X:981
P7G2

INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION (for the study and promotion of satisfactory human relations and conditions in industry)

ASSOCIATION INTERNATIONALE DES RELATIONS INDUSTRIELLES

INTERN. VEREINIGUNG FÜR BESTGESTALTUNG DER ARBEIT IN BETRIEBEN

OUTLINE OF PROGRAMME FOR 1929 DISCUSSION MEETING

to take place at Schloss Elmau, Klais, Oberbayern
from June 26th (evening) to July 3rd (morning)

on the subject of

HUMAN RELATIONS IN A RATIONALLY ORGANIZED INDUSTRY

....Again, we have the contrast between the single workshop and industry as a whole, - the necessity for seeing the larger forces which are behind all these conditions, while at the same time realising that those who have shops and those who work in shops can begin at once working out plans and relationships which are set against the background of the larger problem. - Van Kleeck, Mary, Cambridge Congress Proceedings, Vol. II, Concluding Summary, p. 299.

First Day	a. CONFERENCE AS A MEANS OF COMMUNICATION AND UNDERSTANDING IN INDUSTRY: METHODS OF CONDUCTING CONFERENCES IN INTERNATIONAL ORGANISATIONS AND IN INDUSTRY. b. GROUPS AS FUNDAMENTAL FACTORS IN INDUSTRIAL RELATIONS.
Second Day	WHAT IS A RATIONALLY ORGANIZED INDUSTRY?
Third Day	THE JOB AND ITS CONDITIONS.
Fourth Day	LABOUR'S PARTICIPATION IN A RATIONALLY ORGANIZED INDUSTRY.
Fifth Day	PERSONNEL POLICY AND PROCEDURE.
Sixth Day	ECONOMIC TRENDS AND POLICIES.

PROGRAMME

The material to be used as a basis for discussion will, in the first place, be the proceedings of the Cambridge (England) Congress of the Association in 1928 (on the subject of Fundamental Relationships between all Sections of the Industrial Community), to be supplemented by data on actual experience. With regard to these, Councillors have been asked to collect material of outstanding interest from their countries. Any help which members may be able to give in collecting and forwarding material to the secretariat will be greatly appreciated.

Each item of the programme will be introduced by an opener of discussion, having special experience in the subject for the day. All collected material will be made available for consideration beforehand, in the first place to the opener of discussion and as far as possible to all participants.

In the meeting as planned every member present will have a definite responsibility for sharing in the discussion. It is expected that in this way the asset which the Association has in its varied membership, may be fully utilized.

Formal sessions will be held during the mornings only, the remainder of each day to be arranged according to preference.

The following preliminary elaboration of the topics of the programme may suggest what is in mind. Under each heading a few quotations and references are given, having special bearing on the subject for the day and calling the attention of participants to interesting and stimulating material to be found on each subject in the Cambridge Congress Report.

First Day: A. CONFERENCE AS A MEANS OF COMMUNICATION AND UNDERSTANDING IN INDUSTRY: METHODS OF CONDUCTING CONFERENCES IN INTERNATIONAL ORGANIZATIONS AND IN INDUSTRY.

B. GROUPS AS FUNDAMENTAL FACTORS IN INDUSTRIAL RELATIONS.

This subject will be discussed as an introduction to the second day.

References to Cambridge Congress Proceedings:[1]

We must have mutual understanding if we are to work out collective solutions. We must have contacts for clashes and concert of opinions amid the great mechanisms of modern life. - Kellogg, Paul U., Public Opinion and Industrial Relations, p. 135.

[1] Unless otherwise stated, the references are to Volume II of the Proceedings of the Cambridge Congress, published in two volumes under the title Fundamental Relationships between all Sections of the Industrial Community. Full name of author and title of paper are given only in the first quotation in these notes; later, only the last name of the author and the page number are used to identify the reference.

Succesful co-operation between human beings is primarily a question of successful communication.... Training in self-expression is part of training in co-operation. - Urwick, L., The Nature of the Educational Training. to Equip Foremen and Supervisors, p. 152.

Collectively we may attain a point of view which, individually, would have been out of our reach, because collectively we can set up currents of thought which develop a wonderful driving power.
Perhaps this is the explanation why the results of Conferences and Committees, such as the World Economic Conference, and the English Liberal Industrial Inquiry, as formulated in their statements and resolutions, are often so far in advance of practical achievements. This may be no matter for regret. The future will probably always be forecast before it can be enacted. - Comments of the Honorary Secretary on the First Triennial Period of the Association, p. 26.

Modern industry...consists of groups of persons fixed in little rings, in contact at the edges, and not in very skilful contact, because there is very little movement between these different groups. They do not understand each other. Their languages differ...Your society, the I. R. I., is struggling against the dehumanizing of the actual contacts between men who belong to different groups. To humanize such contacts...is your chief function, not making workers happy.
And humanizing industry is to make each man do the job he is best fitted to perform in close co-operation with those whose co-operation is necessary for his job to be perfected. - Burns, C. Delisle, Groups in Industry, pp. 74-5.

The conflicts which disturb economic life are usually between groups, not between individuals, even though individual leaders exert a strong influence. Moreover, progress is usually made by change in the conscious attitude of groups, or in the terms of their relationships. Clear analysis of relationships must be built upon an analysis of what conditions, needs, or common interests create groups in industry out of which organizations of various kinds evolve...Granted that groups are an inevitable concomitant of large-scale industry, how can the groups be related to one another so as to become a means of preserving the individual and enlarging his opportunity for a satisfactory life? - Comments on the Program, pp. 43-4.

See also the following papers:

Burns, C. Delisle. Groups in Industry.
Comments on the Congress Program (specifically quotations from Follett, Mary, in "Creative Experience" and from Wallas, Graham, in "Our Social Heritage').
Hesselgren, Kerstin, Public Opinion and Industrial Relations.

Second Day: WHAT IS A RATIONALLY ORGANIZED INDUSTRY?

It is proposed at this session to bring forward definitions and examples of (1) scientific organization and scientific management, (2) rationalization, (3) industrial relations. In these definitions will be laid the basis for the subsequent development of the

programme. The fact that scientific organization is assumed, results in defining and sharpening the discussion of the various phases of "methods of promoting satisfactory human relations."

References to Cambridge Congress Proceedings:

Scientific management, says Taylor, is primarily a mental attitude towards work, and only secondarily a system of practices. "The essence of scientific management consists in the application of certain broad general principles. and the particular way in which these principles are applied is a matter of entirely subordinated detail... there is not one who uses the same methods in any two successive establishments", he wrote to a friend. Briefly, this mental attitude involves "the substitution of exact scientific investigation and knowledge for the old individual judgment or opinion. either of the workman or the boss"; and "the substitution of peace for war, ...of hearty brotherly co-operation for contention and strife; of both pulling hard in the same direction instead of pulling apart; of replacing suspicious watchfulness with mutual confidence."

But the manner in which a mental attitude expresses itself in conduct is hardly less important than the attitude... Considering both mental attitude and practice, and looking back from 1928 over forty-eight years of its development, scientific management may be restated as involving: The discovery by investigation and experiment of a factual basis for every determination of policy, program, product, material, machine, tool and method in the operation of an enterprise;

A system of control of operations, in terms of standards determined by the research and experiment, which brings individual specialized efforts into coordination with the result of a minimum expenditure of the human and material energies involved;

Both research and procedures which, although in design and application chiefly the work of specialists, must be open, reasonable, just, acceptable to all individuals concerned, and expressive of a common purpose and good-will. - Person, H. S., Scientific Management, in Cambridge Congress Report, Vol. I, pp. 31-2.

Die wissenschaftliche Betriebsführung (ist)... systematisch durchdachte Praxis. - Wunderlich, Dr. Frieda, Soziologie und Nationalökonomie, p. 81.

(English text: Scientific management is... systematically thought-out practice.)

Gebraucht wird die Wissenschaft schon deshalb, weil alle Eingriffe in die Wirtschaft, die nicht ihrer Struktur gerecht werden, sich der Eigengesetzlichkeit, die ihr innewohnt, nicht einfügen, entweder zum Scheitern verurteilt sind, oder aber Schädigungen an anderer Stelle hervorrufen. Wunderlich, p. 81.

(English text: Science is needed because any interference with industry which is not in accord with its structure or does not conform with its inherent laws, is doomed to fail or to cause damage somewhere.)

Machine industry as we know it, is a very recent institution indeed. It is also a highly dynamic institution at a particularly active period of its revolution. And in all the questions which are concerned with management, with the relations between those

grades in industry whose duty is to plan and to direct and those who co-operate with them, this dynamic characteristic is particularly marked. We are at an intensely interesting stage of development, a stage which has sometimes been called "the second industrial revolution." Just as the application of power to production and advances in the physical sciences opened out that sudden alteration in technique and processes which ushered in the machine age, so the application of the moral and sociological sciences to the relations of those who work in industry which is gathering in force today, and of which this conference is an example, is pregnant with vital alterations in our way of looking at things. - Urwick, The Nature of the Educational Training to Equip Foremen and Supervisors, p. 141.

The true practice of industrial psychology is incompatible with universal mechanical standardisation. Industrial relationships must necessarily be fluid, or at best plastic; perhaps the most valuable contribution of psychology to industrial relationships consists in enforcing this fluidity and plasticity through the realisation of the inevitably wide individual and group mental differences. - Myers, Dr. Charles S., The Contribution of Psychology to Industrial Relationships, p. 108.

There is now evolving a corpus of Industrial Science which, similarly, is wider than Industrial Psychology. It deals with all aspects of industrial life. It involves psychology, ethics, economics, statistics, law, chemistry, physics, engineering, etc. - Myers, p. 100.

As long as our captains of industry treat competition as a basic principle of economic life, an end in itself, a guide to conduct, so long will the mental attitude of those who should be co-operating in our industrial enterprises reflect that erosive belief. I believe that the new attitude to economics which I have suggested is the underlying significance of that general movement of world thought which we are beginning to call Rationalisation. - Urwick, p. 151.

....Harmonious relationships must be established by a clearer definition of functions...Each man has to do the job which he is best able to perform, and we can translate that into the idea that each group has to do the job which it is best able to perform and must have, as a group, the chance to participate in decisions affecting its own interests and the common end. Competence is the only ground for functioning. - van Kleeck, Mary, Concluding Summary, p. 292.

Moreover, as management tends to become a professional task, not to be identified exclusively with the employer group or with capitalistic control, managers become a new group related to wage-earners on the one hand and to employers and owners on the other, and obviously a new alignment of relationships may be brought about. - Comments on the Congress Program, p. 43.

See also the following papers:

Geddes, Patrick, and Branford, Victor, Rural and Urban Thought.
Mars, H., Zum System der Personenbeziehungen in Betrieben.

PROGRAMME

Third Day: THE JOB AND ITS CONDITIONS.

This subject will include: methods of doing the job; mechanization and the control of its development in its effect upon human beings; methods of wage-setting, including the proper share of the respective parties in industry in the savings resulting from elimination of waste and increasing mechanization; time studies; job analyses; the determination of the optimum hours of work; the five-day week, its extent and results; security of employment.

References to Cambridge Congress Proceedings:

"The progress of mankind is written in the history of its tools", asserted Walpole. - Miller, Spencer Jr., The Relation of Industry to Contemporary Civilization, p. 246.

Humanizing industry is to make each man do the job he is best fitted to perform in close co-operation with those whose co-operation is necessary for his job to be perfected. - Burns, p. 75.

Als mechanisch bezeichne ich diejenige Arbeit, die infolge weitgehender Arbeitszerlegung oder Maschinenverwendung vom Arbeitenden weder eigenes Denken noch Disponieren verlangt, bei der der Mensch nicht den Arbeitsvorgang führt, seine gestaltenden und bildenden Kräfte ausgeschaltet sind....Hier wird nicht die Sozialwissenschaft sondern die Technik eingreifen müssen....Aufgabe der Wissenschaft wird es jedenfalls bleiben, alle Formänderungen der Betriebsgestaltung zu verfolgen und auf ihre Tragweite für die Vergeistigung der Arbeit zu untersuchen. - Wunderlich, pp. 81, 83.
(English text: I define as mechanical that work which, as a result of extreme specialization (splitting up of processes) or mechanization demands of the worker neither thought nor actual participation, so that man does not control the process, and his organizing and creative powers are deprived of all expression....Here it is not social science but technology which must take hold of the situation....It will remain the task of science to follow up all transformations in forms of organization and to investigate their bearing upon the spiritualizing of work.)

One of the great psychological factors in the workers' minds is due to the rhythms of contemporary industry. Again, I am not referring to agricultural or domestic work. I am not referring to small-scale industry. The rhythms of contemporary industry are exceedingly regular, exceedingly repetitive. That is to say, there is a continual repetition of the same process, day after day, week after week, year after year; and the rhythm is therefore regular. But human beings are not regular in their rhythms. Everybody knows that on one day he is up, on another day he is down; in one five minutes he may be in heaven, the next in hell. That is to say, a real human being has these varieties of experience. The man who has no variety of rhythms is no human being; he is a machine. Again, the rhythms of a woman's life are different from those of a man's life; and the rhythms of an adolescent's life are different from those of an adult's life. But there is no recognition of this in the regulation of contemporary industry. The productive system

depends for its efficiency upon a hard, monotonous rhythm, which is felt as monotonous when it becomes conscious. - Burns, pp. 65-6.

Where there is no possibility of conversation in a mechanical occupation, the mind tends to day-dream; and in such occupations you find extreme communism, extreme idealism of a religious kind and so on, because the mind is day-dreaming. You know perfectly well what day-dreaming is. It is a sort of running free of the gear; or in the mind one gear is working, the other is running free. In some industries you will find communism, and in others satisfaction with the state of things, largely because conversation is possible in the latter industries. - Burns, p. 66.

The wages system, which is a peculiar institution of comparatively recent date, has not been studied psychologically, because economists are the only people who have really looked at it, and economists do not understand human beings. They talk about natural laws, which are quite excellent things, like gravitation, but are not psychologically of very great importance. The wages system is peculiar because it gives people short views and uncertainty of the future. - Burns, pp. 66-7.

See also the following paper:

Miles, George H., Problems of Method in Research in Industrial Relations.
Urwick, L., The Nature of the Educational Training to Equip Foremen and Supervisors.
Vernon, H. M., The Most Pressing Problems Requiring Research in the Immediate Future.

Subjects proposed by the Austrian members of the I. R. I.:

At a meeting of I. R. I.' members held in Vienna, January 17, 1929, the following proposals were made with reference to the subject of this summer's meeting:

1. Die Verwendung der Rationalisierungsersparnisse bei Intensivierung und Produktivierung der Arbeit.

Zur Klarstellung des Titels erlaubt sich die österreichische Gruppe folgende Begriffsbestimmungen von Arbeitsintensivierung und Arbeitsproduktivierung zu geben: Das Wesen der Arbeitsintensivierung besteht darin, dass dem Arbeitnehmer mehr physische und psychische Kraftäusserungen während derselben oder einer verlängerten Arbeitszeit abgefordert werden als früher, wobei jedoch für die Einheit des erzeugten Produktes die gleiche Menge von Kraftäusserungen für den Arbeitnehmer notwendig ist wie früher. Das Wesen der Produktivierung besteht darin, dass der Effekt menschlicher Kraftäusserungen durch aussermenschliche Mittel vervielfältigt wird, (Benutzung von technischen und organisatorischen Mitteln) oder bei gleichbleibenden aussermenschlichen Mitteln die innermenschlichen Kraftanstrengungen zur Hervorrufung desselben Effektes herabgesetzt werden. Physische und psychische Arbeitserleichterungen.

2. Kritik der gebräuchlichsten Lohnbemessungsmethoden.

(English text: 1. The allocation of the savings obtained as a result of

rationalization, through the intensification of work and the use of organized and mechanical methods. (By intensification is meant the increased use of the workers' powers, mental, moral, and physical, either during the same or a longer period of working time than formerly.)
2. Critical survey of the most common methods of wage-rate-fixing.)

Fourth Day: LABOUR'S PARTICIPATION IN A RATIONALLY ORGANIZED INDUSTRY.

Here will be considered the functioning of trade unions, works councils and other forms of group organization of wage-earners, in the following two parts:

a. Forms and Methods in Actual Practice, Results, Limitations and Potentialities.

b. Possibility of New Forms and Methods of Genuine Collaboration of Labour in the Conduct of a Rationally Organized Industry.

This topic was merely touched upon at the Cambridge Congress, and it is anticipated that new material will be secured from reports of Councillors on prevailing forms and methods in their own countries.

References to Cambridge Congress Proceedings:

Industry in modern times, ... bringing men together in homogeneous occupations which interlock, ... gives people the opportunity of a very highly developed social attitude; but that opportunity so far has not been taken... The scale of the product of modern industry being immense, it gives men the sense of a power which is co-operative as opposed to a power which is individual. They have not grasped it yet, I admit; but it is beginning, especially among the more conscious workers. Co-operative power is immense; individual power nothing. Man is dwarfed, but men are exalted, by the contemporary experience of large-scale products in which many men are working at the same job, or, secondly and still more important, men are working into each other's hands. - Burns, p. 70.

As against the stultifying influence of mass production, workers claim the right of individual assertion through workshop committees - the use of their minds as well as their fingers - in matters of shop organisation. - Fox, R. M., Relationships within the Industrial Establishment from the Workers' Point of View, p. 255.

Works committees are needed to give balance to the machine age - to give human expression which otherwise it would lack. - Fox, p. 255.

The most important development facing us in workshop relations is the growth of these works committees. As they function in the works they will be admitted as an integral part of workshop management. It is on these lines that we must look for a solution of present industrial evils. These committees will bring a new point of view to bear on everything in the workshop. Efficiency experts, whose work up

to the present has often intensified evils rather than lessened them, will have to consider this new factor. - Fox, p. 256.

See also the following papers:

Colman, A. R., Relationships within the Industrial Establishment from the Employer's Point of View.
Lübbe, E., Die Beziehungen innerhalb des industriellen Unternehmens vom Standpunkt des Betriebsrates.
Mars, H., Zum System der Personenbeziehungen in Betrieben
Olzendam, Roderic M., An Industrial Relations Policy and Procedure for a Large Enterprise.

Fifth Day: PERSONNEL POLICY AND PROCEDURE.

This will include selection, training and promotion of employes; relation of labor to the administration of personnel policy; relation of foremen and supervisors to personnel policy and its administration; forms of organization of management and their influence upon personnel procedure; relation of boards of directors and shareholders to personnel policy.

References to Cambridge Congress Proceedings:

Co-operation is a state of mind. Men can be taught to co-operate on one basis and one basis only, enthusiasm for a common object which they understand and appreciate. - Urwick, p. 149.

Personnel work in America is being accepted more and more as a definite function of management, which provides the best methods of work and the best working conditions and which fits the worker to the job for which he is best equipped. Two elements are essential in order to achieve this result:

1. A proper coordination of all the personnel functions through an organization adapted to the requirements of the individual establishment.

2. Technique developed on the basis of the needs of the individual establishment. - Lies, B. Eugenia, The Form Coordination Should Take, or the Place of Personnel Work in the Organisation, p. 221.

Die Untersuchungen über die Beziehungen zwischen den in der Industrie beschäftigten Gruppen zeigen, dass ein Unterschied besteht zwischen Unternehmungen, die in jahrzehntelanger Entwicklung aus kleinsten Anfängen gewachsen sind,.... und denjenigen Unternehmungen, die als Aktiengesellschaft von Anfang an gegründet wurden....Manchmal herrscht zwischen zwei gleich grossen Gesellschaften eine ganz verschiedenartige Gesamttendenz, die nur durch die Entwicklung erklärlich ist. - Lübbe, pp. 270-1.
(English text: Investigations of industrial relations show that there is a difference between enterprises which have grown in a decade of development from the smallest beginnings...and those establishments which were originally founded as stock companies....Often an entirely different tendency controls two equally large establishments, which is only understandable in the light of its history.)

PROGRAMME

It is the inevitable handicap of almost all systems of education that they tend to prepare for the world as it was yesterday rather than for the world as it will be tomorrow....The vast bulk of vocational training is merely the inculcation of knowledge which has already lost touch with truth. What is true of all education is....doubly true of systems designed for those who work in industry. - Urwick, p. 141.

In the individual's environment are included other individuals. It is therefore necessary, in studying the individual, to study the influence upon him of the "group". - Myers, pp. 99-100.

Such systematic selection and guidance has to be extended.....to the choice of executives, so that the nagging and bullying, the weak and undecided, the cranky and unbalanced types of men may be excluded from occupying the positions of managers and foremen.
If they in turn receive some training in psychology, they will come to realise more fully the enormous importance of preventing and allaying the feelings of resentment against real or imaginary injustice, of suspicion arising out of the concealment of facts, of anxiety in regard to accidents, unemployment, promotion and responsibility, and of reducing ignorance as regards higher policy and as to what is happening in other departments of their concern....They will come to realise more fully the striking inefficiency of considering matters solely from the mechanical aspect, without also viewing them from the psychological and physiological aspect, - whether these matters relate to the design of machinery, the layout and organisation of the works, or the movements and training of the workers. The shortest route, the shortest path of movement is not necessarily the best from the human standpoint. The fewest movements are not necessarily the least fatiguing. The movements which suit one worker are not necessarily those which will be best for another worker. - Myers, pp. 105-6.

Serious disturbances of industrial relationships have often apparently trivial immediate causes, but fuller investigation shows a multitude of grievances and irritants both physical and mental, many of which may hardly be recognised as such, even by those most intimately concerned. - Miles, George H., Problems of Method in Research in Industrial Relations, p. 234.

"Do unto others as you would others do unto you", only envisages a part of the problem of industrial relationships. It is not enough to try to put yourself in the place of others....You have to consider how that other person will respond. - Myers, p. 102.

In human relationships the personal and emotional aspect is in general of much greater weight than the purely intellectual aspect. It may be quite possible to arrive at a solution of a problem in relationships which is satisfactory from the material point of view, is logically correct and intellectually sound, yet this solution may not be accepted by any of those fundamentally concerned, due to the fact that sufficient weight has not been given to the emotional aspect of the problem. This is as much a reality as the more easily defined material side. - Miles, p. 230.

What we need is a psychological study of the attitude actually operative in industrial policy. When we know more, we shall see how this particular shop can be made to work, by a clearer understanding of the attitude of

the persons in the shop and the persons managing. Also in a much bigger field we shall see that the industrial world is not made up simply of men as men, but of men in occupations, with the attitudes caused by those occupations and the vague desires that originate deep down in men to live their lives as men, in spite of the conditions which we have inherited. - Burns, p. 76.

Industrial relationships are the outcome of growth and development, and therefore a true appreciation of any particular case requires a knowledge of the fashion by which the situation has been reached and the influences which have determined the course of development....The effect of a series of mistakes in the treatment of personnel may persist for years and show itself in suspicion of every form of change. - Miles, pp. 234-5 .

....that faculty of appreciating the method and the spirit by which a number of specialized tasks may be united in furthering a single end, which we call co-operation. Leadership and co-operation - these are the two, and I feel personally the only two ends of importance towards which systems of foreman education should be directed. - Urwick, p. 146.

I believe that the functional conception of management, alone of all the theories of industrial organisation which have been put before us in the last decades, really goes to the heart of our difficulties....Whatever the ownership of industry, the real hardships will continue unless there is a fundamental change in organisation and method. We are dealing with something far more subtle than a vague sense of injustice which is open to any legal adjustment. We are dealing with an objection to direction and obligation become articulate with the spread of political liberty and popular education. And the sole answer we can give to that objection is to show that direction and obligation are not personal, not enforced by sanctions which rest on might, but natural, inevitable in the order of things if the worker is to be clothed and housed and fed. That is to say we must give to the workers exactly the same answer as Taylor gave, when challenged on the ground that this functional foremanship contravenes the principle that "no man can serve two masters". He replied that it did not upset the principle, but enforced it. Under functional foremanship everyone, employer, foreman, and workers alike, serves one master - knowledge. - Urwick, pp. 144-5.

Under present-day conditions the gulf, both from an intellectual point of view and from the group point of view, between the higher management and the rank and file worker is enormous....There is....a tendency to take up an entirely different attitude towards the same facts. - Miles, p. 232.

The majority of the people who hold the capital never hear from one end of the year to the other how their income is earned. Nor do they care. And besides, they are completely out of touch with the mechanisms, the tools, the use of which make their income. They are dominated by the desire for what they call security and a regular income....They are the people whose influence in industry has an ambiguous effect. It may be used to resist changes in industry because any change might make a difference to the dividend. - Burns, p. 73.

PROGRAMME

See also the following papers:

Colman, A. R., Relationships within the Industrial Establishment from the Employer's Point of View.
Miller, Spencer, Jr., The Relation of Industry to Contemporary Civilization.
Olzendam ,Roderic M., An Industrial Relations Policy and Procedure for a Large Enterprise.
Van Kleeck, Mary, Concluding Summary.

Sixth Day: ECONOMIC TRENDS AND POLICIES.

Here will be discussed an approach to the larger problems of economic policy as they appear in trends toward combinations of industries and the further development of rationalization and scientific management - all considered in their effect upon human relations in industry. The significance of methods of conference in which all groups in industry will participate will be reviewed and elaborated in its bearing upon the formulation of economic policies which shall tend to promote satisfactory human relations.

References to Cambridge Congress Proceedings:

What is really exciting the workers is general economic policy, and not particular management problems, because in currency, in export trade, in general problems of emigration and so on, the conscious part of the working population is beginning to see the fate which decides whether they shall have a job next year or not. The old attitude is changing...
It is beginning now to be felt by the worker that "If the manager will leave me alone, I will leave him alone. Managing is one job; running your lathe is another job. You must not come and tell me how to run the lathe; and I will not come and tell you how to run your office"....The conscious persons in these groups are beginning to feel that the manager as well as the worker at the lathe or in the mill is being moved by forces which he cannot control, and that he too, the manager in industry, is a cog in the vast machine. He suspects that what runs the machine is not the management in industry, still less the management in the shop, but economic policy. - Burns, pp. 72; 71.

....Die Hauptursache dieser Unsicherheit its allerdings begründet in ökonomischen Vorgängen, in Krisen, die die Arbeitnehmerschaft - dieses Schicksal wird von den Angestellten geteilt - mit Entlassung, mit Arbeitslosigkeit bedrohen. - Wunderlich, p. 84.
(English text: The chief reason for this insecurity is, to be sure, grounded in economic events, in crises which threaten the labor force with dismissal and with unemployment - a fate shared with the salaried workers.)

We have come into a new epoch in the history of mankind; and as it is a new epoch, we might well say that we are still in our young days, with all that it means of uncertainty, mistakes, groping for light and wisdom in our ways of living this new industrial life. - Hesselgren, p. 116.

Es wird Aufgabe der zukünftigen Wirtschaftswissenschaft sein, eine Theorie des Konsums zu schaffen. - Wunderlich, p. 88.
(English text: It will be a task of the economic science of the future to create a theory of consumption.)

In the second quarter of the new century we must give as much attention to synthesis and the vital application of scientific advances, as we put into analysis in the first quarter. - Kellogg, p. 127.

We have paid attention to the science of production, but the whole question of controls and of finance in its actual effect upon working relationships and economic organization has not been studied in any truly scientific way. - van Kleeck, Mary, Concluding Summary, p. 293.

We can... produce such a relationship between groups as shall establish their responsibility one to another in their common aim, and the first step towards that end is the definition of an aim which combines the interests of all groups. It must be clearly recognized that the primary aim of a given industry is to make goods or to perform some service not, in the first instance, to make money. The test of whether it is performing that service is, first, the quality of its goods and its service, and the price it charges to the public; second, quality and price depend upon the status of those who produce the goods or perform the service, and their power to do their work well depends upon recognition of their status as human beings; the third test under present conditions is whether or not the enterprise provides a safe investment for capital.
....Until we put the realities of production in the centre of the picture and make production the practical objective of economic activity, and test economic activity by whether or not it is producing goods well, we are going to get unreal economic policy which understands the figures involved in finance and does not understand what is involved in production. Human relationships cannot be sound under such conditions. - van Kleeck, pp. 292-3.

See also the following paper:

Geddes, Patrick, and Branford, Victor, The Interrelated Sciences.

PREFACE

In the following pages the reader will find evidence of interesting experience to which expression was given at the recent Discussion Meeting of the International Industrial Relations Association by members from the sphere of both Management and Labour. They further contain contributions resulting from the observations made by members from the domain of Science.

Much that is of value has needs been excluded from this volume, - the size of which has been limited to the budget of the Association - in favour of the inclusion of a section of translations. For the same reason only a choice could be made among the many interesting memoranda which were specially prepared for the occasion of the Meeting.

In this connection we are greatly indebted to Frau Dr. Hildegard Böhme, Berlin, for the very considerable assistance which she has generously given to the Association in the work of translation, thus making possible many texts in the German language which would otherwise have been unobtainable.

The programme of this Meeting, which extended over several days, is incorporated in the present volume.

It must unfortunately be regarded as a rare event when Management, Labour and Science thus meet, free from all official representation, on one platform, for a prolonged period, purely for the purpose of interchange of knowledge, enhancing thereby the value of each other's findings and contributing collectively to a more complete and fundamental conception of Industry, its organization and its relationships.

One of the participants, a functionary in the International Labour Office, suggested that "the great value of the I. R. I. is to bring together details of the actual practice in the shop, and on the basis of that information to go forward and to blaze new trails in what, after all, in most countries is still the dense jungle of industrial relations."

Another member of the meeting, a leader in the Management Research Groups of Great Britain, in referring to these Groups said: "By means of such organized deliberations between men whose daily lives are spent in direct contact with the realities of industrial life, we are groping our way towards the elucidation of those fundamental principles, the sound ethical basis of which form the special and most valuable preoccupation of the I. R. I."

Whither is this preoccupation leading us, was asked by a German employer. Whither tends this quest for a sound ethical basis?

When we shall have come away from detail and are ready to face the totality of things, shall we then find ourselves prepared to formulate, either to ourselves or to each other, what, in our present world-order - or rather lack of it - should constitute this basis?
Has the truth yet been sufficiently grasped that the world in which we live is new; that it is what technique, communication, transport and the world war have recently made it; a new world, with new possibilities, new needs and new relationships?

As a result new adjustments are needed over greater areas. The centre of gravity seems changing from production to distribution and consumption. Both manager and worker are becoming increasingly aware of the controlling power of these outside forces.
A hitherto unknown set of economic laws has come into play. Production and consumption interlock in a new and mighty way. And unless we are prepared to face the problem in its entirety and fundamentally to adjust ourselves, will the current of events find the world unable to establish and maintain such order as alone will be conducive to the benefit of mankind.

The Hague, February 1930.

VORWORT

Auf den folgenden Seiten findet der Leser interessante Aeusserungen und Erfahrungen, die auf der letzten Aussprache-Tagung der Internationalen Vereinigung zur Bestgestaltung der Arbeit in Betrieben aus Kreisen der Betriebsleitung und der Arbeiterschaft vorgebracht wurden. Ferner bringt die Schrift Beiträge von einzelnen Persönlichkeiten über die Ergebnisse ihrer sozialwissenschaftlichen Untersuchungen.
Viel Wertvolles konnte in diesen Band nicht aufgenommen werden - dessen Umfang den der Vereinigung zur Verfügung stehenden Mitteln angepasst werden musste -, der jedoch in einem besonderen Teil Uebersetzungen und zwar deutsche und einige englische und französische Uebertragungen der Originaltexte enthält. Aus dem gleichen Grunde konnte auch nur eine Auswahl der interessanten Memoranden zum Abdruck gelangen, die für die Zusammenkunft vorbereitet worden waren.
An dieser Stelle möchten wir Frau Dr. Hildegard Böhme, Berlin, danken, die uns wesentliche Unterstützung durch Uebersetzungen geleistet hat und ohne deren Hilfe es nicht möglich gewesen wäre, so viele deutsche Uebertragungen vorzunehmen.
Das Programm der Aussprache, die sich über mehrere Tage ausdehnte, ist in dem vorliegenden Bande enthalten.

Es ist ein seltenes Ereignis, wenn sich Betriebsleitung, Arbeiterschaft und Wissenschaft frei von den Verpflichtungen der offiziellen Vertretung für längere Zeit und nur zum Zwecke des Erfahrungsaustausches zusammenfinden, und bei dieser Gelegenheit den Wert der Zusammenarbeit und gemeinsamer Lösungsversuche für eine tiefergehende und umfassendere Erkenntnis des Wesens der Industrie, ihrer Struktur und ihrer Beziehungen schätzen lernen.
Nach dem Urteil eines Mitarbeiters des Internationalen Arbeitsamtes, der an der Aussprache teilnahm, besteht die Bedeutung der I. R. I. darin, "Einzelerfahrungen aus den Betrieben zusammenzutragen und, ausgerüstet mit diesen Kenntnissen, neue Pfade in die in den meisten Ländern noch bestehende undurchdringliche Wildnis der industriellen Beziehungen zu bahnen".
Ein anderer Teilnehmer an der Aussprache, ein Führer der Management Research Groups in Gross-Britannien, sagt mit Bezug auf diese Gruppen: "Durch diese planmässig herbeigeführten Besprechungen zwischen Männern, die mitten in der Praxis des Wirtschaftslebens stehen, gelangen wir allmählich zu neuen

Grundsätzen, zu gesunden ethischen Grundlagen, deren Erarbeitung die ureigene und bedeutendste Aufgabe der I. R. I. bildet."

Wohin führen uns diese Bestrebungen? Wohin zielt dieses Suchen nach gesunden ethischen Grundlagen, fragte ein deutscher Arbeitgeber.

Wenn wir von den Einzelheiten loskommen und dazu gelangen, die Dinge um uns her in ihrer Totalität zu erfassen, werden wir dann fähig sein, allein für uns oder für die Gemeinschaft innerhalb der heutigen Weltordnung diese neuen Grundlagen zu gestalten?
Ist es uns schon ganz zum Bewusstsein gekommen, dass wir in einer neuen Welt leben, der Technik, Verkehr, Weltverflechtung und Weltkrieg das Gepräge gegeben haben - eine neue Welt mit neuen Möglichkeiten, neuen Bedürfnissen, neuen Beziehungen?

Und darum tut eine Umstellung not - auf dem Gesamtgebiet der Wirtschaft. Die weltwirtschaftliche Situation führt zwangsläufig zu einer stärkeren Berücksichtigung der Fragen der Verteilung und des Verbrauchs. Arbeitgeber und Arbeitnehmer spüren in zunehmendem Masse den beherrschenden Einfluss dieser weltwirtschaftlichen Zusammenhänge.
Bisher unerkannte ökonomische Gesetze beginnen sich auszuwirken. Produktion und Konsumtion greifen in einer neuen und machtvollen Weise ineinander. Und wenn wir nicht daran gehen, das Problem der Beziehungen erschöpfend und grundsätzlich zu erfassen und uns darauf einzustellen, so wird der Strom der Ereignisse über eine Welt dahinbrausen, die unfähig ist, die Ordnung zu schaffen und aufrecht zu erhalten, die allein zum Segen der Menschheit führen kann.

Haag, Februar 1930.

PRÉFACE

Dans les pages qui suivent, le lecteur verra se manifester le témoignage d'une intéressante expérience acquise ayant pu trouver son expression dans la récente Assemblée de Discussion de l'Association Internationale des Relations Industrielles, grâce aux débats institués entre ses membres appartenant au Capital comme au Travail. Le présent volume contient en outre des contributions résultant des observations faites par les membres relevant du domaine de la Science.

Bien des contributions précieuses ont dû être nécessairement écartées de ce volume, - dont l'étendue a été limitée par les ressources de l'Association, - en vue d'y adjoindre une section de traductions. Pour la même raison, il a fallu se contenter de procéder à un choix parmi les nombreux et intéressants mémoires spécialement préparés à l'association de l'assemblée.

Nous tenons, à cet égard, à exprimer tous nos remerciements à Mme. Hildegard Böhme, Berlin, pour l'aide considérable qu'elle a généreusement apportée à l'Association en assumant la rédaction d'un grand nombre de traductions en langue allemande dont, sans cette précieuse assistance, l'exécution n'eût pas été possible.

Le programme de cette assemblée, qui a duré plusieurs jours, figure également dans les pages qu'on va lire.

On est malheureusement obligé de considérer comme un événement rare de voir la Direction, le Travail et la Science se rencontrer ainsi, indépendamment de toute représentation officielle, sur un même terrain et pour une période prolongée, dans l'unique but de procéder à un échange de leurs connaissances, tout en renforçant la valeur de leurs découvertes respectives et tout en contribuant, en commun, à l'élaboration d'une conception plus complète et plus fondamentale de l'Industrie, de son organisation et des relations qui lui sont propres.

Comme l'a dit l'un des participants, fonctionnaire du Bureau International du Travail, "la grande valeur de l'I. R. I. est de rassembler des données de détail sur la pratique réelle du travail à l'usine et, sur la base de ces données, d'aller de l'avant et de marquer de nouvelles voies parmi ce qui n'est encore, en somme, dans la plupart des pays, qu'une jungle inextricable de relations industrielles."

Un autre membre de l'assemblée, l'une des personnalités dirigeantes des groupements de Grande-Bretagne adonnés à l'étude de l'organisation du travail, a dit, parlant de ces groupements:

"Grâce à des délibérations de cette sorte, organisées entre des hommes dont la vie quotidienne se trouve perpétuellement en contact direct avec les réalités de la vie industrielle, nous nous frayons un chemin vers l'élucidation de ces principes essentiels dont la saine base éthique constitue la préoccupation à la fois la plus particulière et la plus fondamentale de l'I. R. I."

Où cette préoccupation nous conduit-elle? a demandé un employeur allemand. A quoi tend cette recherche d'une base éthique?

Lorsque nous aurons pu nous détacher des détails particuliers et que nous serons à même d'envisager les choses dans leur totalité, serons-nous préparés à nous formuler à nous-mêmes ou à autrui ce qui, dans l'ordre présent du monde, - ou plus exactement dans son absence d'ordre, - devrait constituer cette base?
A-t-on, de nos jours, suffisamment compris cette vérité que le monde dans lequel nous vivons est un monde nouveau; qu'il est ce que l'ont fait la technique, les communications, les transports et la guerre mondiale, - un monde nouveau, avec ses possibilités nouvelles, ses besoins nouveaux et ses nouvelles relations?

Aussi un travail d'adaptation nouvelle doit-il être réalisé sur une plus grande échelle. Le centre de gravité de l'univers économique semble se déplacer et passer de la production à la distribution. L'employeur et l'ouvrier prennent de plus en plus conscience, l'un et l'autre, de la puissance de contrôle impartée à ces forces extérieures.
Un ensemble de lois économiques, auparavant inconnues, est entré en jeu. La production et la consommation se mêlent et se compénètrent d'une façon nouvelle et formidable. Et si nous ne nous préparons pas à envisager ce problème dans son intégralité et à fond, afin de nous adapter aux nécessités qu'il pose, l'enchaînement des faits trouvera le monde incapable d'établir et de maintenir le seul ordre des choses qui puisse être profitable à l'humanité.

La Haye, Février 1930.

CONTENTS

INTRODUCTORY

		Page
PROGRAMME OF 1929 DISCUSSION MEETING		5
PREFACE		18
VORWORT		20
PRÉFACE		22

ORIGINAL CONTRIBUTIONS

GROUPS AS FUNDAMENTAL FACTORS IN INDUSTRIAL RELATIONS	by	M. L. Fleddérus	31
RATIONAL ORGANIZATION	„	L. Urwick, O.B.E., M.C., M.A.,	35
THE DETERMINATION OF THE OPTIMUM HOURS OF WORK WITH SPECIAL REFERENCE TO THE FIVE-DAY WEEK	„	Dr. H. M. Vernon	53
ARBEIT UND ARBEITSBEDINGUNGEN	„	Erich Lübbe	62
DIE MITARBEIT DER ARBEITERSCHAFT IN DER RATIONALISIERTEN INDUSTRIE	„	Hans Mars	70
PERSONNEL POLICY AND PROCEDURE	„	Dr. C. H. Northcott	93
ADDENDUM	„	Thyra Smith	103
LES SOURCES PROFONDES DE LA PRODUCTIVITÉ	„	H. Dubreuil	107
LA RATIONALISATION EN TANT QU'ÉLÉMENT DE L'ÉVOLUTION DE LA VIE ÉCONOMIQUE	„	H. Pauwels	115
CONCLUDING SUMMARY	„	Mary van Kleeck	120

CONTENTS

SUPPLEMENTARY MEMORANDA

			Page
CONFERENCE AS A MEANS OF COMMUNICATION AND UNDERSTANDING IN INDUSTRY: METHODS OF CONDUCTING CONFERENCES IN INTERNATIONAL ORGANISATIONS AND IN INDUSTRY	contributed by	John J. Hader and C. E. Lindeman	135
PRELIMINARY STATEMENT REGARDING DEFINITION OF INDUSTRIAL RELATIONS	„	Dr. H. S. Person	139
DEFINITION OF A SCIENTIFICALLY ORGANIZED INDUSTRY	„	Rita Hopf. . .	141
A CASE CONTRASTING SCIENTIFIC MANAGEMENT WITH CONVENTIONAL MANAGEMENT	„	Dr. H. S. Person	143
WHAT IS SCIENTIFIC MANAGEMENT?	„	„	146
A 1929 STATEMENT OF PRINCIPLES OF SCIENTIFIC MANAGEMENT	„	„	148
BEDINGUNGEN DES PRODUKTIONSQUANTUMS UND DER INTENSITÄT .	„	Dr. O. Lipmann .	149
THE COLLECTIVE CONTRACT SYSTEM IN COALMINING IN AUSTRALIA; TWO EXPERIMENTS	„	F. R. E. Mauldon	150
CANADIAN NATIONAL RAILWAYS RELATIONS TO UNIONIZED LABOUR AND UNION MANAGEMENT CO-OPERATIVE PLAN	„	R. A. C. Henry .	152
THE AESTHETIC RESULTS OF RATIONAL METHODS IN FACTORY BUILDING.	„	C. H. v. d. Leeuw	156

TRANSLATIONS, ÜBERSETZUNGEN, TRADUCTIONS

a. Into ENGLISH:

THE JOB AND ITS CONDITIONS. .	by	Erich Lübbe	161
INDUSTRY - A SCIENCE AND AN ART	„	H. Dubreuil	167

CONTENTS

			Page
RATIONAL ORGANISATION AS AN ELEMENT IN THE EVOLUTION OF ECONOMIC LIFE	by	H. Pauwels	170
b. Ins DEUTSCHE:			
GRUPPEN ALS AUSSCHLAGGEBENDE FAKTOREN DER BEZIEHUNGEN IN DER INDUSTRIE	„	M. L. Fleddérus	175
RATIONELLE ORGANISATION	„	L. Urwick	178
DIE FESTSETZUNG OPTIMALER ARBEITSZEITEN UNTER BESONDERER BERÜCKSICHTIGUNG DER FÜNFTAGE-WOCHE	„	H. M. Vernon	193
PERSONALPOLITIK UND PERSONALPFLEGE	„	C. H. Northcott	200
ADDENDUM	„	Thyra Smith	208
DER URQUELL DER PRODUKTIVITÄT	„	H. Dubreuil	211
DIE RATIONELLE ORGANISATION ALS ELEMENT DER ENTWICKLUNG DES WIRTSCHAFTSLEBENS	„	H. Pauwels	215
ZUSAMMENFASSENDE SCHLUSSREDE	„	Mary van Kleeck	219
c. En FRANÇAIS:			
DES GROUPES COMME FACTEURS FONDAMENTAUX DES RELATIONS INDUSTRIELLES	„	M. L. Fleddérus	231
ORGANISATION RATIONELLE	„	L. Urwick	235
EXPOSÉ TERMINAL	„	Mary van Kleeck	250

ADDENDUM

LIST OF PARTICIPANTS, TEILNEHMERLISTE, LISTE DES MEMBRES DE LA RÉUNION	263
I.R.I. STATEMENT, BESCHREIBUNG, DESCRIPTION	270
LIST OF PUBLICATIONS, LISTE DER VERÖFFENTLICHUNGEN, LISTE DES PUBLICATIONS	276
LIST OF OFFICERS AND MEMBERS OF EXECUTIVE COMMITTEE	279

ORİGINAL CONTRIBUTIONS

GROUPS AS FUNDAMENTAL FACTORS IN INDUSTRIAL RELATIONS

BY M. L. FLEDDÉRUS, VICE-PRESIDENT I. R. I., THE HAGUE, HOLLAND.

On the programme it is indicated that "Groups as Fundamental Factors in Industrial Relations" will briefly be discussed as an introduction to our subject: What is a rationally organized Industry?

I think we can hardly open our discussions otherwise. If scientific management is one half of the circle of rational organisation, surely industrial relations are the other half.

That these industrial relations are group relations, rather than individual relations, is indicative of the present in which we are living and prophetic for the future of even greater mass living towards which we seem to be trending.

How characteristic of our times this existing in groups is as compared to the man to man relationship of early and comparatively recent industry, we find expressed in the key-words of our present day industrial literature. I have noted some of these words as I came across them. * We are all familiar with them, yet it may be interesting and stimulating to bear them in mind and to add to them as we go along. These words are indicative of the life we live, either consciously or unconsciously.

At Cambridge Dr. Delisle Burns specially treated the subject of groups in Industry. In going through the report, however, it is significant to see how every speaker dwells upon the fact of grouping in Industry. Some, like Dr. Myers, Dr. Miles, Major Urwick, very directly; in other papers we find the group idea implied as the unseen framework supporting the structure.

The purpose of the Cambridge Congress was, in reality, a striving after a fuller consciousness of the industrial world in which we are moving. Whatsoever we are not conscious of will not affect us. As soon as we are fully conscious of either a fact, or a development, we can begin either to add, counteract, remedy or adjust. Our real discomfort lies always in the period of semi-consciousness.

We are, I believe, in such a period of semi-consciousness in Industry at present. The discomfort of this period is the more

*) Key-words in present day industry: mass-production, rationalization, standardization, interdependence, interaction, cooperation, leadership, teamwork, combine, complex, dynamic.

distracting because of the mushroom growth of industry, a complex growth, the full significance of which only time will show. But we can, if we wish, do some pioneering in being ahead of time, shorten discomfort by dispassionately studying these developments and by making ourselves conscious advocates of such measures as will relieve tension and promote adjustment.

It is, then, the group existence in Industry which we find greatly emphasized throughout the Cambridge Report. This being so, the importance of and the opportunity for leadership becomes at once apparent. Many form the group but the one or the few give direction.

At Cambridge Major Urwick said: "We have got to think this question of leadership out again from the beginning. It is urgent. For until we do, no changes in the higher organization of industry will avail us. In the long last it is the details of every day which count. Industrial relations are made in the shop."

Because we all feel that in the shop power is generated, not only the power that makes goods, but along with it the power which creates human relations, have we come together in a discussion meeting. It is the first time, since we called ourselves together into an Association, that we feel we can fruitfully do so. We first needed a certain growing together and the creating of a common background. This we have been doing before and at Cambridge. We also needed the use of the telescope to search the economic and social world around us in which our shops are units, where they play the role of organs in a larger organism. Without this wider horizon we cannot have the vision of where any methods which we may conceive are going to lead us.

I think there is no need for me to take up time in bringing forward the various emphases on groups, which we find throughout the Cambridge Congress Report. In the printed programme we have given but very few quotations and referred only to a few papers. But those among you who were at Cambridge, and all of you who have read the Report, will no doubt be aware of the many references made to "groups" in addition to the treatment which Dr. Delisle Burns gave of the subject. There are the essential groups (like labour, management, owners), and there are the much more numerous

groups which are formed - as Dr. Delisle Burns expresses it - "by the pressure of the same circumstances upon the minds of individuals." We find this also expressed by Dr. Miles, who says: "In Industry there is always a tendency for the growth of groups. In the factory a number of men or women engaged on similar work have the same experiences in common. They have similar difficulties in their work, they are subject to the same contacts with management and in time there develops an accepted mode of reaction." Dr. Miles goes on to say: "It is not surprizing under modern industrial conditions, requiring as they do a high degree of specialization, that many groups develop within the organization."

Dr. Myers finds his way to the group through the study of the individual. "In the individual's environment are included other individuals. It is therefore necessary, in studying the individual, to study the influence upon him of the "group".

These few quotations already give sufficient food for thought. If, on the one hand, pressure of circumstances creates groups in Industry, it also creates, on the other hand, what Dr. Delisle Burns calls "the opportunity for a very highly developed social attitude, an opportunity which so far has not been taken." What does a very highly developed social attitude in Industry mean? Dr. Burns has not worked this out in his paper and I am wondering whether, at the end of our week of discussion, we may have arrived together at a clear, practical conception of this. That the importance of and the need for leadership will be emphasized in this conception, I have no doubt.

One of our up-to-date words in Industry is "standardization". It is a group word. It is always used with reference to material and processes. I suggest that another group word should rank alongside of it in importance, namely the word "standard". Industry is intent on the standardization of machinery, tools and product, but should it not be equally intent on the standard of humanely fitting techniques, cultural remuneration, educative discipline and high ethics of work? And because of the very fact that we have no longer in Industry the man to man but the group situation, would not any progressive standard, set and understood by those who have the spark

of leadership in them, develop an accumulative force? I believe Major Urwick touched upon this in Cambridge, when he mentioned that in Great Britain there were instances where the manager and employer group had evoked, what he called, "an amazing degree of co-operative effort and feeling for the concern as a concern from the lower grades of the staff". Major Urwick goes on to say "they should take no credit for it. It is merely a demonstration of the amazing susceptibility of the human mind to group loyalties and ideas - an almost untilled field in psychology. I suggest to all of you", Major Urwick goes on to say, "that this one fact contains a core of hope for the future social progress of humanity. We have here at our hands a dynamic power for betterment."

To my mind this power is the greater because of the increasing group situation in Industry. For the evolving of this dynamic power does not lie with employers and management alone. It lies with the many accidental as well as with the essential groups. Its demonstration and its force depend again upon those who understand the standards and techniques set by management in collaboration with labour, and who can evoke from their group a response to what should be its loyalties and its ideals.

We have a week before us in which to try to conceive what should be those standards and techniques which would make for satisfactory human relations in rationally organized Industry. The task we have set ourselves is not a light one. There exists no experience of complete scientific, or let us say rational, organization. We cannot dwell upon the past and only partially upon the present. We have to invite the future into that present.

That, in reality, is the task which we have set ourselves. It is for everyone of us to share in it. There is a creativeness in collective thinking. At times we need a mountain top to survey the land which lies before us, and having done that we can re-descend into our own particular valley, to work with purpose, discrimination and understanding.

RATIONAL ORGANIZATION

BY L. URWICK, O.B.E., M.C., M.A.,
DIRECTOR INTERNATIONAL MANAGEMENT INSTITUTE, GENEVA.

The word "rationalisation" has been defined by such an authoritative body as the World Economic Conference of 1927. That Conference was composed of representatives of the employers, of labour, and of the economists drawn from almost every nation. Its sub-committee on Industry spent a considerable proportion of its time on this precise question and was fortified with a mass of preparatory material. At the end of their labours they came out perfectly definitely with a series of resolutions which began as follows: "Rationalization, by which we understand the methods of technique and organization designed to secure the minimum waste of effort and material.... includes the scientific organization of labour, standardization both of material and products, simplification of processes and improvements in the system of transport and marketing".

The Reichskuratorium für Wirtschaftlichkeit, the central official body charged with the study of rationalized methods in Germany, had already published a definition which reads as follows: "Rationalization consists in understanding and applying every means of improving the general economic situation through technical and systematic organization. Its object is an increase in the standard of living by the provision of better and cheaper goods in larger quantities. This demands a common effort by all classes of the community". It will be noted how closely this definition corresponds with that of the World Economic Conference.

Both the World Economic Conference and the Reichskuratorium definitely suggest what the end of rationalization is: in the one case to secure the "minimum waste of effort and material" and in the other, "an increase in the standard of living by the provision of better and cheaper goods in larger quantities."

It appears to me that many critics miss the significance of rationalization because in consideration of method they have lost sight of these quite definite statements of purpose. Their acceptance by a World Economic Conference marks a radical departure in our economic thinking. At a later stage in its resolutions the Conference stated that "rationalization is calculated to secure to the community greater stability and a higher standard of life". These phrases are a clear admission that, whatever form of organization we may accept as the most practicable for the time being, there is a purpose in industry

and commerce above and beyond the profit of particular business enterprises. Our economic machinery exists not to enrich individuals - that is incidental - but to serve the community. It is for this reason that I would suggest to you that the first item in any definition of what is a scientifically organized industry should be a clear statement of this aim or end on some such lines as the following: "A scientifically organized industry is a group of enterprises engaged in supplying similar or allied requirements to the community by methods involving the minimum waste of either effort or material".

I need hardly emphasize what a mental revolution - one of F. W. Taylor's favourite phrases about scientific management - is involved in this frank admission of a social purpose underlying our economic structure. Hitherto world economics have been dominated by conceptions inherited from a handicraft period and totally unsuitable to the new technical conditions introduced by the application of power to machinery. There is always something of this lag between the techniques evolved by society and the adjustment of social ideas to meet the new conditions.

Mechanical production, dominated by the conception of the division of labour, demands for its effective operation a delicacy of co-operation quite unnecessary in a handicraft and localised industry. This imperious necessity for co-operation stretches out beyond the individual factory into markets and countries throughout the area of the civilized globe. It is unnecessary in this audience to stress the delicate interlocking of effort involved, for instance, in the sale of a pound of tea in a New York warehouse or a print dress in Calcutta. It is amazing that we should have continued to believe for so long that all this detailed network of mutual aid could be regulated solely by reference to a theory which, expressed in its crudest form, amounted to "Every man for himself and the devil take the hindermost".

I suggest that future generations looking back on our times will note it as one of the most remarkable incidents in the history of the human mind that, throughout the 19th Century, the industrialized civilization of the West definitely ruled out of its thinking any responsibility for the whole delicate structure of its economic life. Much as our earlier ancestors ascribed the operation of any force which they were unable to explain, to the intervention of "some god or other", so the world of business right down to to-day has ascribed the whole regulation of

economic life to the supposedly beneficent regulation of "some god or other", which they call Competition. I believe too, that this same student in the future, who will look back with amazement upon our animistic interpretation of economic facts, will mark the World Economic Conference of 1927 as the dawn of a new period. He will note that for the first time, however dimly and however unwittingly, the leaders of the world's thought in these matters contemplated the possibility that humanity might assume conscious control of its economic machinery; might direct it deliberately and definitely for the common good.

I believe too that this same student, in following this evolution of our thought, will be struck particularly with one special aspect of the matter. He will note that the solution of the very difficulties and complexities in economic life which frightened the 19th Century into refusing any responsibility for controlling it, was found in that very intellectual technique which had made possible the material advances which were at the root of those complexities. I refer, of course, to the intellectual technique developed by the workers in the exact sciences - a technique which made the machine age possible.

If we turn to method, we note that the Reichskuratorium speaks of technical and systematic organisation. The World Economic Conference definitely lists a series of movements which are, one and all, dependant not only on discoveries in the material sciences themselves, but on the use of the intellectual methods developed by workers in those sciences, to solve the difficulties of applying them to practical life.

If we take this view, the relation of rationalization to scientific management is clear. In the field of the management of individual industrial enterprises F. W. Taylor initiated the application of scientific intellectual method. Rationalization applies that method, however, not only to problems of industrial management, and within the framework of the existing economic order, but to the co-ordination of the whole world economic activity on a national and international scale, to the solution of a l l the problems of production, distribution and consumption. In short to the reconstruction of economic life in the large.

Every sincere student of rationalization admits frankly his immense debt to the scientific management movement. He is but applying on a greater scale that "mental revolution" of which

F. W. Taylor spoke. It would appear then to be of little practical value to give time in defining the exact boundaries of scientific management. It preceded that wider and more general movement of ideas which is called "rationalization". It made an integral contribution to it. So long as that contribution is recognised, it will little become those whose fundamental philosophy is known under either title, to spend time discussing its exact limits.

If this analysis of what was implicit in the resolutions of the World Economic Conference is accepted, it follows immediately that rationalization is both an attitude and a process. As an attitude it records the belief that a more rational control of world economic life through the application of scientific method is possible and desirable. As a process it implies the application of the scientific intellectual technique to all problems arising in the organization and conduct of production, distribution and consumption.

It follows that since this wider conception which we call Rationalization is but a few years old in Europe and dates in the United States even, only from 1921, we can scarcely expect to be able to point to practical and complete examples of rationalized or scientifically managed industries. The time is not yet.

Even to-day there is no single factory in the world which can be said to be scientifically managed throughout its operations. When, however, we turn to whole industries the field is far wider and consequently slower to react to any efforts made in it, and in the majority of instances, the educational process involved demands the collaboration not of salaried employees but of independant employers.

It follows that any attempt to define or describe what is a scientifically organized industry or, I venture to suggest as an alternative, a rationalized industry, at this stage, must necessarily be a patch-work of partial experiments and inconclusive or half-hearted efforts.

These efforts are in process all over the world. There has probably never at any time been so rapid a revolution in human thinking about economic affairs and their reactions on social life as has taken place within the last decade. But it has taken

us a good century to get on effective terms with the technical problems involved in the application of power to machinery. And I venture to suggest that it will probably take the world more than a further century for our minds to get on effective terms with the enormous consequences of the application of scientific intellectual technique to individual life and social relationships.

It is only to-day that the common man begins to run his own radio and his own motor car and thus by the use and wont of every day to think intelligently and objectively in terms of machinery. He is learning, for instance, that when his Ford Car breaks down, kicking it in the radiator is not usually effective, though it is one of the limitations of its mechanism that a good shake sometimes is. But in his relations with his fellow men he is still largely irrational. His reactions are emotional and instinctive rather than analytical and deliberate. It will take some generations to train his leaders into what I might call the true engineering approach to awkward human situations. It will inevitably take longer for the effects of such teaching in action to impress the minds of those who are submitted to them towards a similar outlook. A completely rationalized economy can only be conducted by human beings who are prepared themselves to be completely rational.

It may, however, be useful in the concluding time at my disposal to attempt to show how those partial experiments of which we have evidence may be used to build up a picture of such a scientifically organized industry of the future. Such an attempt is obviously in part a work of imagination and partakes of that character of theory so unpopular with practical men. But indeed one of the vital changes which is necessary in the mentality of the leaders of our economic life, if we are ever to realize in practice the ideal of an organized society, is an abandonment of this false antithesis between theory and practice.

One of the chief lessons which the present experiments in scientific management have to teach us is that the art of management, of organizing large bodies of our fellow men, is an art which must be based on a searching intellectual study of the underlying sciences bearing on it, coupled with that power of synthesised expression which is the distinguishing hall mark of real ability as opposed to mere academic facility. In some degree this has already been realized by practical students of modern business management. I have found within the last few years in American

RATIONAL ORGANIZATION

Journals phrases such as the following: "Those business leaders who are so totally devoid of vision that they like to describe themselves as practical men", or again: "Practice is static but theory is dynamic. All improvements, all progress, result from some individual imagining a new combination of forces, or a new way of carrying out an accustomed task; this imagining is building a theory".
That is my excuse for talking to you about what must be, under existing conditions, "the industry of a dream".

In the first place, while we have agreed that the object of any industry must be to provide goods or services to the community with a minimum of waste of material and effort, we have undoubtedly to consider, and particularly in this environment, the fundamental relationships of those engaged in the control of that industry. In Mr. G. D. H. Cole's new edition of his "Payment of Wages" there is a chapter on scientific management in which he says: "In so far as scientific management is a doctrine at all, it is raised upon the belief that industrial organization is an exact science, and that in the factory the government of natural law must replace the rule of force and opinion.... This point of view I challenge. I hold firmly that no sphere of human action or conduct can be reduced to the dimensions of an exact science. I hold that political self-government is good, not simply as ministering to "efficiency" but because it is self-government and I hold that in every sphere of human action self-government is in itself good, because the greatest of man's achievements is the government of himself."
In this sentence we have what is apparently a basic difference of outlook between democratic thinkers and those who seek for a scientifically organized industry. I suggest that the apparent antithesis is one of words rather than of realities. When we say that a scientifically managed industry is one which involves the minimum of waste, either of effort or material, we include in that phrase such wastes as would result from forms of organization damaging to the human spirit. Let us accept Mr. Cole's contention that political self-government is good because it is self-government. That does not alter the fact that we may desire as an ideal that such government of self should be conducted not in the light of unrealized emotions and instincts, but in the light of a complete and scientific knowledge of himself, enjoyed by every individual. In the same connection Mr.

Cole says: "Democrats have contended that, while the expert and science have their place in government, the social life of man is finally not a matter of abstract science but a matter of positive will". I must confess that I cannot entirely agree with Mr. Cole's adjectives. There is no reason why science should always be abstract. Nor is the will of the governed invariably positive. At the present stage of our civilization it has an unpleasant practice of being merely negative.

But the main point which Mr. Cole seems to miss, apart from the question of the possibility of each individual adopting a scientific approach for himself, is the fact that the proper structure for the expression of self-government must itself be the subject of study inspired by the scientific spirit, if satisfactory practice is to result from it. It is of course admitted by every student of scientific management that, at their present stage of development, the sciences of physiology and psychology have not provided us with any certain guide to human conduct. In some fields they can supply the statesman and the administrator with information which is likely to be far more accurate than opinions founded upon his own limited personal experience. But a lot of water has yet to flow under the bridge before their conclusions can be accepted as a complete foundation for action on any sociological question.

But that does not alter the fact that in approaching such questions the statesman and the administrator can correct the recognized limitations of "human judgment" (a phrase which I prefer to Mr. Cole's "positive will") by adopting the temper and the technique employed by scientific workers. An admirable example is afforded by the very issue which Mr. Cole uses as an analogy in discussing scientific management in industry, namely, the place of the expert in political self-government. We are only at the beginning of the comparative study of analogous problems worked out in different spheres of human organization, but there is no question that there lies awaiting research an enormous mass of experience on this particular issue. Obviously somewhere there is a balance between the contribution which the expert can bring to bear on any question and the disadvantage of removing too much initiative from the other members of the same organism who are not expert in his particular subject. As far as we can judge at present, however, the whole tendency of our present civilization is towards an ever increasing sub-division of labour and a refinement of the func-

tional correlations by which these various expertnesses may be united in working towards a common objective.

A precise example of the kind of scientific work in this sphere of which I am thinking is afforded by the famous chapter in Industrial Democracy in which the Webbs discuss the experience of the British Trade Unions in the relationships between the members and the executive officials. They show how, in this case, the elementary democratic contention that every executive official should be subject to periodical and direct popular election, has had to give way to the logic of events . In practice it has failed to work, partly because such a method resulted in intolerable conditions of employment for the officials considered as salaried servants of the Trade Unions. There has been an increasing tendency to recognize that where permanent administrators are concerned they should not be subject to such direct election but to appointment by an administrative body ,who themselves are popularly elected.

What I am suggesting is that in this fundamental question of a share in the control of industry for the workers, the sciences of administration and of comparative organization will in the future have a great deal to say. It is impossible to conceive that large bodies of men can be organized effectively for production in the face of methods of control which do violence to their sense of justice. If the rank and file of the industries of the future feel that as individual and reasonable citizens they should participate in the control of the industries in which they work, it will be essential that they shall have such a share in the control, or there will be much psychological waste and the industries will not satisfy our definition.

But on the other hand the methods by which such a share in the control is expressed, the mechanisms established, the relationships between the workers who share in the control and administrative officials and specialists of various kinds, will undoubtedly be largely determined by reference to an objective and comparative study of various experiments and experience not only in industry but in many other fields of human activity. I entirely agree with Mr. Cole that self-government is in itself a good thing. But I believe it is a good thing because it is the surest and quickest method of bringing the rank and file of industry into a scientific frame of mind. Only when men participate in the responsibility for an action are they brought directly into relation with the consequences of that action. Thus self-

government is in itself the a. b. c. of scientific training, since it directly connects cause and effect and submits those who practise it to the hard discipline of facts. There is no antithesis between a scientifically organized industry and one enjoying a large measure of self-government by all the workers in it, provided that the mechanisms by which such self-government is realized and expressed are themselves the subject of scientific investigation.

The one overriding condition which they must fulfil is that they avoid waste of effort, and that includes psychological wastes due to unreasonable or ignorant interference with those whose function it is to manage and to administer. A recent observer has recorded that the economic machinery of the Moscow government is the slowest and most unwieldy in the world. The object of economic activity is production of goods and services at minimum cost to the community, not production of debating societies at the community's expense.

Turning to the second great partner in the industrial process, capital, we find already an anomalous situation. Theoretically, and to a large extent legally, the control of any industry rests with those who have provided the capital to build it up. In practice the case is far otherwise. Nominally, under the law of limited liability in the industrial countries, the shareholder exercises that right of control by the formal right to appoint and to remove administrators, and by opportunities for criticism at stated intervals. But actually a variety of causes have operated to remove any effective exercise of that right. An increasing amount of industrial capital is raised in the form of prior charge securities from which controlling rights are expressly excluded. The information given to shareholders is, in the majority of instances, far too meagre to permit of effective criticism and too much "after the event" to form the basis for action on his part. The practice of establishing "holding companies" and similar interlocking of proprietorships complicates the facts beyond the possibility of useful discussion by an outsider. In the appointment of administrators there is seldom available any alternative but to accept the nominee of the existing group.

The shareholder on his part has contributed to the process which has deprived him of his theoretical control. He has been increasingly willing to accept a security giving a fixed, and particularly a fixed and cumulative rate of interest, however illusory

its apparent additional safety as a prior charge. This in itself is a declaration that what he seeks is to rent capital rather than to participate in actual industrial activity. When of a more speculative turn of temperament, he is far more likely to sell his holding on the market for what he can get for it than to trouble himself to exercise such rights of control as he possesses, where he imagines that things are going wrong. Finally in recent years the growth of the investment trust has provided a further avenue by which the ordinary shareholder divests himself of such meagre share of the responsibility for control as remains with him.

It will be seen that the contention of many socialists that the workers in industry, including the administrators, should hire capital, rather than that capital should hire them, has in part and in practice been realised. It appears to me inevitable that a scientifically managed industry in the future will recognize this fact in theory and in law as well as in practice, and that the functions of providing money and of control will be divided. Capital will be hired like any other commodity. But it will not necessarily carry even a theoretical right to control and, only in exceptional cases, to a prior claim on any surplus over and above a normal market rate of interest. Such exceptional cases will be of course those industries which are new or highly speculative, where exceptional rewards will be necessary to induce investors to accept the exceptional risks involved. But it should be noticed that these exceptional rewards will not be part of a traditional assumption that capital has a "right" to the whole of the surplus, but a scientific calculation of the amount of stimulus necessary to call forth the required sum given the degree of risk involved in each particular instance.

This analysis of the situation with regard to capital and its share of control does however raise a further question. If it is true that to a large degree the money invested in industry to-day does not carry an effective control of industry, two points arise.

In the first place, who does control industry? Undoubtedly the legal right to take the major decisions in administration tends to rest more and more in small groups of financier entrepreneurs who possess the two special capacities of being skilled in persuading the public to entrust them with the charge of their money and being exceptionally knowledgeable or for-

tunate in placing that money where it will yield satisfactory returns from productive enterprise. It is unquestionable that such individuals often fulfil an extremely useful function in economic society: they direct the flow of money into channels which are profitable and exercise a criticism of those actually engaged in the management of production which is frequently salutary. On the other hand two wastes may be noted as a result of the system. The public demand for quick returns does not always correspond with the longer period requirements of industry - the trades or concerns most in need of capital for re-equipment and re-organization presenting the less favourable prospects of immediate profits. Secondly the primary pre-occupation of the financier-administrator with the earning power of the undertakings in which he is interested, places too great an emphasis on the financial aspects of his administrative work to the neglect of a longer view bearing on its administrative and organization efficiency. Criticism of an informed quality by the investor or shareholder is impossible owing to the surrender of his controlling functions. And since the groups of financier-administrators are practically self-elective and self-perpetuating, adequate criticism of any sort is almost entirely absent.

The second point which I wish to suggest as of importance is this. If it is true that the critical and controlling function of the shareholder has been allowed to atrophy, does a scientific analysis suggest that that function was redundant, or merely that the arrangements for exercising it were unsuitable? I suggest that an objective examination of the facts of industry and, too, a comparative study of other organizations, will definitely indicate that this function of criticism and revision is a desirable part of any administrative structure which aspires to health. If this is so and the shareholder is unable or unwilling to exercise it effectively, it follows that in a scientifically managed industry it will be entrusted to some other body, or at all events arranged for in some other way.

To summarize this section of the "dream", I suggest that the scientifically managed industry of the future:

> will necessarily involve a substantial degree of workers' control, but that the mechanisms and forms of that control will accord rather with the findings of comparative administration than with any political preconceptions;

will raise the necessary capital to finance its undertakings quite apart from any question of control, save in the case of the exceptionally speculative and new undertakings;
will replace the shareholder's important functions of criticism and revision of the administration which have become atrophied by other mechanisms designed for this purpose;
in the wider question of the direction and flow of capital will be subjected to some degree of centralized direction or at least influence, either on a national or on an international basis.

I should like to emphasize that this "forecast" is not an attempt to talk politics. I do not suggest that these arrangements will be good or bad for industrial life. I do not think we have enough information as yet to judge of their results. I merely indicate that an objective examination of the material available in the light of the principle of least waste, points in some such direction. I have called my outline a "dream", but it is a dream based on bits of reality drawn from various quarters of the business world. "Workers Control" has long been a remote ideal of trade union policy in various countries. But Russian and Italian experience, no less than the more realistic tendencies of Socialist thought to which I have referred, indicate that its application and reactions on administrative efficiency will be studied with the minutest care, not least by the workers' representatives themselves. In the meanwhile there is a wealth of experience and experiment to be drawn from various undertakings.

The raising of new capital without any share in control attaching to it is already an accomplished fact over large areas of business activity. The replacement of the shareholders' function of criticism and revision of the administration by other mechanisms has been the subject of experiments, notably in the case of the Shareholders' Committee of the Dennison Manufacturing Company Inc. and in the case of various devices for permitting regular criticism by the workers. The idea of the public control of the direction and flow of capital has been expressed in Great Britain in the Liberal Industrial Enquiry's proposal for a Board of National Investment: it also corresponds with the idea underlying much of the work of the Federal Reserve Board.

Since full knowledge of the facts is of the essence of the scientific technique, it seems probable that in future the controlling elements in each enterprise or industry, however constituted, will

be both supplied with and required to reveal far more comprehensive and frequent facts and figures bearing on their operations than we have at present at all contemplated. This in itself will have an enormous psychological effect both on the relations of all the parties to industry and further on the attitude of those entrusted with the administration. Darkness and dirt, secrecy and self-seeking are twins. The honest administrator neither fears nor shuns open statement. As an English publicist recently remarked "publicity secretes freedom in the degree of its own existence".

Let us turn from finance and control to those other mechanisms which an industry must establish if it is to exercise a "scientific" management over its own destiny.

It is sometimes assumed that Rationalization necessarily involves trustification, the creation of very large units of control under unified ownership. From the experiments so far carried out, I am not at all sure that this is the case either in every instance in the same industry or in the large majority of industries. It is clear that the existence of a large number of small competing units in any one industry, possessing no common policy or programme, leads to great wastes and inefficiences. But on the other hand we have, I believe, a great deal to learn about the administrative difficulties of managing these larger integrations under unified control. At the moment there has been little or no objective study of the principles involved as far as industry is concerned. But the remarks of many leading industrialists are a mine of information as to the inefficiencies of public administration. What has yet to be ascertained is, how far those inefficiencies are really a function of the form of ownership of the undertaking and how far they represent the normal reaction of human nature to organzation which has grown beyond a certain scale. It is clear even to casual observation that modern large-scale industrial undertakings and services are not wholly free from some of the traditional vices of bureaucracy. Many privately-owned railway systems offer an illustration.

Moreover every impartial observer must be impressed by the character of the experiments which Mr. Hoover has been carrying through in the United States. The demand for unified ownership or control is essentially based on the assumption that it is impossible to secure common action or adherence to a common programme without the use of force. But it becomes daily

clearer that the limitations of authoritativeness are strictly fixed. The history of the XVIII Amendment is a case in point. It is entirely characteristic of Mr. Hoover's philosophy that he should have based his campaign to ameliorate that situation, not on an enlargement of legal sanctions and police provisions, but on a definite moral crusade, an attempt to win public opinion to the support of the law.

Whether he is successful in that campaign or not, there is abundant evidence that he has achieved a high degree of success in his attempts to unite business men in clearer appreciation of the value of a common policy. His various efforts at the Department of Commerce towards standardization and simplification in a large variety of industries, towards the more intelligent use of statistics as a check on excessive production, towards better-informed methods of marketing both domestic and foreign, are world-famous. But in no instance has there been any element of compulsion or legal sanction. The process has rather been one of steady educational pressure, a relentless presentation of the facts. The business men concerned have learned to come into line not with the law of the land but with the far more imperative law of the situation.

I would suggest that further research into the question of the unit of control will probably reveal that it is almost entirely a technical question. That is to say, that for each product and each industry there will be discovered to be a scientifically most efficient, that is - least wasteful, unit of size, and that this unit will vary for different functions within the same industry. That is to say the size of unit of control which is scientifically best for productive purposes will vary from that best suited to distributive requirements or again to financial needs. And one of the basic requirements of a scientifically organized industry will be a research department engaged in the study of this specific problem and sustained out of a common fund subscribed by the industry.

Such a centralized department could not however do reasonable and effective work without a large amount of statistical material bearing on the various units in the industry. And such material, if it is to provide a basis for scientific conclusions, must be strictly comparable - which brings us inevitably to standardized costing and accountancy methods. But here again I would suggest that moral pressure and professional pride are stronger than compulsion. The Federation of Master Printers of Great

Britain have conducted such a system for over fifteen years. It has been an immense boon to the industry. Price-cutting has been practically eliminated. Over 80 % of the concerns in the industry have adopted it. But there has been no compulsion whatever.

From what has already been said it is clear that a scientifically organized industry will have in addition some method of dealing as a whole with simplification and standardization, and with statistics for avoiding over-production beyond what the market will bear. This last point raises of course the central issue of rationalization, the adjustment of supply to potential demand.

Here a distinction must be drawn between those industries where the amount of total production in any period is dependent on human intention and effort, and those dealing in a natural product, where the fluctuations of a harvest may upset all calculations. There is of course a deep-seated, though lessening, prejudice against any attempt to limit production in order to stabilise prices. Among consumers who have been told for a century that competition is their one safeguard against exploitation this is not surprising. The immediate effect of an excess of production in any commodity is a sharp drop in the price all over the market. The consumer reaps a substantial short period benefit. But if the fall is serious enough to destroy the profit margin of a large section of producers over more than a short period, it is to be questioned whether the consumer ultimately reaps any benefit. Such disturbances to industry have to be paid for, in lost capital and ruined enterprises, in unemployment, in stagnation in allied or dependent trades. And in the long run there is no source from which that payment can come except the consumer's pocket. This is but another aspect of the conception of "high wages". Just as it is impossible for the product of industry to be consumed unless the necessary sum of wages and dividends are forthcoming from industry, so it is impossible for lost capital to be replaced and the wheels of a stricken trade to be set going again, except from profits realized from the consumer. The way to a progressive lowering of prices to the consumer is not by sudden bursts of over-production, leading to rapid falls in prices, but through sufficient stability in the market to enable the more efficient

units to increase efficiency progressively through foresighted planning and bold investment in equipment.

In the case of natural products which can be stored, it is suggested that some system of pooling of margins or even of co-operative marketing arrangements is necessary if production is to be placed on a scientific basis. But it might prove sufficient if producers would unite in some form of mutual insurance, covering the risk of an excessive crop, just as any other normal risk is covered. Mr. Fox's example from the Irish Dairy Industry is suggestive here.

In the case of manufactured articles two separate cases have to be considered. In the first place there is the industry whose existing productive capacity exceeds the requirements of its available market. Two courses are open to it - to reduce the investment in plant and equipment or to enlarge the market. The tendency at the moment in Europe is all in the former direction. And indeed a deliberate concentration and specialization of plants, with elimination of weaker producers, may be necessary to restore health to an industry which has been suffering from economic disturbance. But it should always be remembered that health should not have been lost. The existence of inefficient producers within an industry argues a number of factories which have not been scientifically managed, and more particularly which have not devoted an adequate proportion of past earning power to the renewal of equipment. As Mr. Garrett puts it in his fascinating little book "The American Omen" - "overproduction is a function of obsolescence". This point is one which a more scientifically organized industry of the future will watch very closely. It is a paradox of economic life that inefficiency in one's competitors is in the long run far more dangerous than efficiency.

The second course, that of enlarging the market, is the one that recommends itself as more in accord with a scientific economic procedure. I believe it is an almost unconscious recognition of this fact that is leading Great Britain to hesitate at the present juncture between an economic policy which looks towards Europe and one directed to the development of her imperial resources. The establishment of the Empire Marketing Board is a deliberate attempt to foster the growth of a market in this way. A second direction in which such growth may be fostered is by the development of new uses for the products of the industry or even the creation of fresh needs which it is

in a position to supply. The scientifically managed industry of the future will certainly not grudge the resources for the maintenance of central statistics bearing on these points, and for special combined technical research and market research, with, possibly, combined publicity.

It appears to me that the maintenance of such statistics bearing on the total productive power of the industry will deal automatically with the second alternative, that of the constant threat of over-production by the entry of new enterprises into that particular branch of trade. A truly scientific control will not attempt to check such entry directly. It will recognize that too great security has its dangers no less than too great disturbance. Industries can become comfortable and obese. It makes for a rising standard of efficiency that there should be a fairly constant stream of newcomers who are seriously prepared to manufacture at lower cost than the general level prevailing in the industry. But the preparation should be serious. What I am suggesting is that men do not deliberately and willingly enter an existing industrial field where there is already adequate production, unless the rate of profit being realized is excessive or the general level of efficiency is very low. But in the vast majority of cases they enter it without any idea whatever of its actual productive capacity. I believe that a scientifically managed industry will place at the disposal of the newcomer full statistical information on these points. And in many cases he will not come at all. Men do not select risky investments from ill-will but from ignorance.

I must draw to a close. It is of course impossible in a single paper to touch more than the fringe of this vast subject. I have not outlined the mechanisms which a scientifically organized industry will establish for joint consideration of its problems of employment, conditions, remuneration etc. Again, there is the whole field of co-operative action for research into the technical and human problems of industry. We have already many suggestive experiments in this field. Nor have I said anything about the individual plant. In every modern factory there are a large variety of specialised functions. In each establishment every one of these functions must be subjected to the scientific technique. Similarly we have to consider all the main aspects of the working life of the individual on which further research and

experiment must be brought to bear if we are to avoid waste, that is, to recruit his full potential energy for the service of the community. The main point I have tried to emphasize is that much of our present thinking about the mechanisms of Rationalization is coloured by the old ideas of force in economic life. A more scientific analysis of the conception of control will, I believe, make clear how limited are the practical possibilities of using force. In any event there is a vast field before us in the development of this new approach to economic problems which we call rationalization.

But though the field is vast, it is, I suggest, a field of infinite hopefulness and possibility. Consider how new the conception is. Think for a moment what a revolution it has already caused in much of the world's economic thinking - as an example the remarks of Mr. Ford and the chief men in General Motors to newspaper men who were agog for details of a dramatic but destructive competitive struggle. Realize how the older fatalistic conception of competitive action not only led us to deny all responsibility for the conscious ordering of the world's economic life, but shut each man in behind a wall of secrecy and enmity, so that not only were the simplest and most elementary facts lacking in the formation of any reasoned judgment on business matters, but all that moral and intellectual inspiration which comes of frank discussion with one's fellows, was denied to the business man. It is not for nothing that some of the groups recently formed among industrialists in various countries for the mutual discussion of common management problems have been called "the business man's university".

And its influence will not be limited to the economic field alone. I believe that this great new step forward in our thinking about material things, is destined to have reactions over the whole of civilized life. Already it has brought us here together at Elmau. Fourteen years ago to-day I was fighting like an animal for my life round the stables of Hooge Chateau, possibly with some of those who are sitting in this room. The organization of material prosperity is one of the great common interests of mankind, where already the area of mutual dependence far exceeds the possibilities of national isolation. Is it not possible that as we come to consider its problems more rationally - that is, with less fear of each other, less superstition, less ruthlessness - we shall also see more clearly the way of understanding in those political issues which divide the nations?

THE DETERMINATION OF THE OPTIMUM HOURS OF WORK WITH SPECIAL REFERENCE TO THE FIVE-DAY WEEK,

BY Dr. H. M. VERNON, INVESTIGATOR FOR THE INDUSTRIAL FATIGUE RESEARCH BOARD, LONDON.

Introduction. The duration of the hours of industrial work is a question of universal interest, and it is one which has been fully debated at several international conferences during the last few years. At the Washington Conference in 1919 the discussions lasted nearly a month, and finally a convention was adopted by 82 votes to 2, according to which it was recommended that the working hours of persons employed in any public or private industrial undertaking should not exceed 8 in the day and 48 in the week, with certain exceptions. According to one of these exceptions, it was arranged that if less than 8 hours were worked on one or more days of the week, then a maximum of 9 hours might be worked on other days. Hence it appeared to follow that if a 5-day week were adopted, the maximum weekly hours of work permitted would amount only to 45, and not to 48. However, this provision appears to have been abrogated at the London Conference held in 1926, for it was then laid down (Article VI, b) that the hours of work might be distributed in each week over five days, or in two weeks over 11 days, "it being understood that the average working hours may in no case exceed 48 per week".

Though the Washington Convention has as yet been ratified by only a very few countries, it seems probable that its general ratification is not likely to be postponed much longer. It is therefore of great interest for us to determine how far, if at all, the reduction of working hours to 48 a week is likely to influence production. The ratification of the convention would not have much practical effect in England, for at the present time only 7 per cent of all the industrial workers work for more than 48 hours per week. In other countries, however, the proportion of workers affected would usually be greater. In Germany, for instance, it is stated, as the result of a Government inquiry made in 1926, that 48 per cent of the work people in the metal industry, and 63 per cent of those in the textile industry, worked more than 48 hours per week.

Is the 48-Hour Week the Optimum? When estimating the effects of adopting the 48-hour week we ought, so far as is possible, to try and take into account not only questions of

output, but the influence of reduced hours of work on the health of the workers and on their degree of contentment with their conditions of work, as indicated by their labour turnover and their tendency to strike. A discontented body of workers who frequently go on strike will not, in the long run, produce so much as a contented body who have a rather lower weekly output in consequence of working shorter hours.

The effect of the 48-hour week on industrial efficiency was discussed by P. S. Florence [2]) in an article published in 1924 in the International Labour Review, and he concluded that probably it "best satisfies the criterion of maximum output with minimum accidents, lost time, and overhead charges." A year later Prof. Edgard Milhaud [3]) discussed the problem in the same review, and he had a vast mass of information to draw upon, as he had been for several years engaged in making an inquiry into industrial production throughout the world on behalf on the International Labour Office. His conclusions about the effects of adopting the eight-hour day were not so favourable as those of Florence, for he found that scientific researches in various countries showed that "with few exceptions, production can only be maintained, after a considerable reduction of hours, by the combined action of greater intensity of work and technical improvements. To expect the increased productivity of the workers to make up entirely for a reduction of hours is, it is felt, to mistake the real economic significance and scope of that reduction, and in particular of the eight-hour day."

Milhaud's conclusions appear to have been based, for the most part, on the opinion of employers, and they were not the result of first-hand investigation by himself. The views of employers are very likely to be misleading, for they naturally tend to err on the side of caution when they relate to reduction in the hours of work; but a more important argument against the acceptance of their views lies in the fact that very few of them appear to realise that, when the hours of work are reduced, it takes many months before the workers get thoroughly adapted to their new conditions of labour, and reach a steady level of increased production. Most employers are content to contrast output for the three or six months immediately before and immediately after the change of hours, and thereby they may miss a great deal of the effect on the speed of production. For instance, as

[2]) See page 61 for all references.

the result of weekly observations for a period of 21 months on the output of large groups of men and women engaged in making time fuses, I found [3]) that when the hours of work were reduced, e.g., from 74½ a week to 63½, and subsequently from 63½ to 55½, there was no increase in the rate of production for the first two or three weeks. Then it rose gradually, and after two to four months it reached a steady level, some 21 to 29 per cent higher than before. When the hours of work of a group of steel smelters were reduced from 12 to 8 per shift, it took no less than 13 months before the increased speed of production reached its maximum. Again, Mather and Platt [4]) found that when they reduced the length of the working week at the Salford Iron Works from 53 to 48 hours, it took over eight months to attain the full measure of production.

An analysis of the statistical information available concerning the reduction of hours from 54 to 48 shows that in almost every case the speed of production increased so much as to over-compensate for the shorter hours of work, and therefore to result in an actual increase of total productivity. In the above-mentioned experiment of Mather and Platt the output of the factory, which included both piece-rate workers and time-rate workers, was ultimately 0.1 per cent greater when the 48-hour week was worked than it had been with the 53-hour week. In another engineering works the reduction in the hours of work from 54 to 48 led to a slight increase in production, and in another, the reduction from 54 to 51 a week did not add to the cost of production [7]). In another industry, coal mining, a reduction in the hours of work from 10 to 8 a day in some American mines resulted in an increase of 17 per cent in the average output per man, and this improvement was ascribed solely to the increased energy of the men, and not to any improvements of plant. Again, a granite-cutting firm found that their men accomplished more work in a 9-hour day than in a 10-hour day, and more still in an 8-hour day, the conditions of work being unchanged [7]).

Arising out of the Mather and Platt experiment, various Government factories in England concerned in the production of ordnance, stores, and clothes, reduced their hours of work from 53¾ to 48 a week, and they found that both the piece-rate and the time-rate workers earned as much as before. Perhaps the most detailed and best authenticated evidence of all is that recorded by Abbé [1]), who reduced the hours of work at the Zeiss

optical works from 9 to 8 a day, and found that in consequence the total output of the group of 233 men tested showed an average increase of 3.3 per cent.

At the present time it is very difficult in England to obtain evidence of the effects of reduction in the hours of work, as a 48 or 44-hour week is almost universal except in certain continuous industries. However, Florence [2]) records some recent evidence relating to boot and shoe operatives which was comminucated to him by Vernon and Bedford. This evidence showed that the weekly productivity of a group of 20 men engaged in "clicking" went up 4 to 6 per cent when their hours of work were reduced from 52½ to 47½ per week, whilst that of a group of women engaged in "closing" went up 22 per cent.

Most of the work described above is dependent chiefly on human labour, or on human labour and on machinery in more or less equal degree, so that a reduction in hours of work could be compensated for by an increase of human effort. In some industries, however, the machine element is so large and the human effort so small that but little compensation is possible. In cotton spinning, for instance, a single operative may have to take care of as many as 1,000 spindles, her job being to join together the ends of any yarns which become broken, and to replace the full bobbins by empty ones. The spindles are rotated at a fixed speed, and the average time lost from breakage of yarn represents less than 1 per cent of the total spindle time, so there is very little opportunity of saving time by increase of human effort. Again, in the continuous processes of the iron and steel trade there is usually not much room for improvement. The 12-hour day and night shifts formerly worked in the industry are now replaced (in England) by three successive 8-hour shifts; but it is impossible for the men on the shorter shifts to effect a 50 per cent increase in their rate of work. Indeed, the output of the blast furnaces, which are always kept nearly fully loaded, can scarcely be accelerated at all. However, that of the steel furnaces and rolling mills may show some rise, and in some instances it is found possible to reduce the number of men required [8]).

It is not possible to say definitely what proportion of the men and women engaged in industry are employed on work of such a character that a reduction in the hours of work to 48 per week can be fully compensated by an increase of human effort; but speaking from my own knowledge, which is fairly wide, I

should say that in Great Britain they form considerably over half of the whole number, and perhaps two-thirds.

It may be suggested that if a reduction of hours to 48 a week leads to an increase of output in the majority of industries, a further reduction might lead to a still greater increase. In fact, a 44-hour week is frequently worked in English factories, but there is very little evidence to show how output is affected. It is stated [7]) that in a large soap factory the output was maintained when the hours of work were reduced from 53 a week to 48, and then to 44, though in the case of the machine workers it was necessary to speed up the machines. Again, a manufacturer of insulating apparatus reduced the hours of work in one department from 8 to 7 a day, and the men soon found that they could produce as much as before.

Taking industry as a whole, it seems unlikely that output would be maintained if the hours were reduced much below 48 a week, though it is probable that a reduction from 48 to 44, or possibly even to 40, could be compensated for by increased human effort in such occupations as involved a good deal of hand work. However, it is possible to reduce the hours of work in another way which results in a considerable increase of production, namely, by the adoption of the two-shift system. In England it is permissible, under certain conditions, to run a first shift from 6 a.m. to 2 p.m., followed by a second one from 2 to 10 p.m., in place of the single shift of 8 to 9 hours which is worked between the hours of 8 a.m. and 6 p.m. Under the two shift system the workers get only a half-hour break in the middle of their shift, and therefore they work 7½ hours a day. They work six and five of these shifts in alternate weeks, so on an average they work 41¼ hours a week. Smith and Vernon [8]) studied the output of 2,400 women who worked for periods of three months or more both on shift work and on day work. They were employed at eight factories, and were engaged in coil winding, wire drawing, cable work and lathe work. Their output and hours of work showed the following mean differences:

	Weekly hours of work	Hourly output	Output per week		
Shift workers	41	2.39	41	2.39	98
Day workers	49	2.08	49	2.08	102

The hourly rate of work of the shift workers was 15 per cent

greater than that of the day workers, but as they put in 8 hours less of work per week they were not able to produce quite such a big weekly output. Still, it should be remembered that the two shifts, taken together, produced so very much more than the single shift that the saving in overhead charges must have much more than compensated for the small loss of individual output.

What is the Best Duration of the Work Spells? If a 48-hour week is adopted, how are the hours best divided up into work spells? In England a Saturday half-holiday is universal, so it follows that, if a half day of work is done on Saturday morning, 8¾ hours have to be put in on each of the other days; or if Saturday morning work is abolished altogether, then 9½ or 9¾ hours must be worked. Thus:

	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
5½-day week	8¾	8¾	8¾	8¾	8¾	4¼
5-day week	9½	9¾	9½	9¾	9½	

In England it is customary to have two work spells a day, separated by a break of one hour for dinner. Hence it follows that the 8¾ hours of work mentioned are cut up into spells of 4½ + 4¼ hours, or of 4¾ + 4 hours, whilst the 9¾ hours are cut up into spells of 5 + 4¾ hours. In any case, it is impossible to avoid a continuous stretch of more than 4 hours' work, unless the working week is reduced to 44 hours. Such a week divides up nicely into 4 + 4 hours on Monday to Friday, and 4 hours on Saturday.

When a worker is called upon to labour continuously for 4½ to 5 hours on end, it usually means that he (or she) has to go for nearly six hours without food. An investigation made at several large factories [11]) showed that, owing to the distances travelled by the workers and the difficulties of transport, over 40 minutes were taken by them, on an average, in getting from their homes to the factory, and altogether the total interval between breakfast and dinner came to about six hours. The workers find this period too long, and they are apt to bring food into the factory and eat it surreptitiously. It is therefore better to introduce a rest pause of 10 minutes or so in the middle of any work spell lasting more than four hours,

during which the workers are allowed to partake of food they may have brought with them. At many factories in Great Britain they are also provided with a cup of tea by the management. This cutting up of a long work spell by a brief break has a psychological advantage as well as a physiological one, for two work periods of about 2½ hours each appear much less formidable and less depressing to the imagination than a single one of 4¾ hours. It might be thought that the working time lost by the break would appreciably reduce output, but it is not so as a rule. Vernon and Bedford [10]) collected information at various factories relating to women engaged in labelling, tying up packages, shoe making, assembling bicycle chains, ironing, and folding and stitching handkerchiefs, and they found that the introduction of a 10-minute rest pause in the middle of the 4½-hour morning work spell caused the weekly output to increase 6 per cent, on an average. That is to say, the women quickened their speed of work so much as to over-compensate for the daily loss of 10 minutes of working time. It was noticeable that in these instances, as in those previously referred to which related to reduction in the hours of work, an interval of three to six months elapsed between the introduction of the rest pause and the attainment of the full response of increased output.

When a 5½-day week is worked, it is probably best to split up the 8¾ hours of daily work into a morning spell of 4¾ hours, with a rest pause in the middle, and an afternoon spell of 4 hours, without a rest pause. Under the 5-day week scheme the daily quota of 9½ or 9¾ hours implies the adoption of a rest pause in the afternoon spell as well as in the morning spell. It is sometimes stated that the introduction of these rests means the loss of a good deal of extra time over and above the nominal rest-pause time, as the workers lose the swing of their work and it is difficult to get them to start punctually after the rest. Certainly extra time may be lost, but it was found [11]) that in some factories, where the discipline was good, the nominal rests were not exceeded at all. Again, it has been stated that in certain semi-continuous processes connected with the manufacture of chocolates and biscuits, the introduction of a break involves the waste of extra time in stopping and re-starting the processes. However, this objection can be avoided by employing temporary substitutes and by arranging that

various groups of women take their rest pause successively, and not simultaneously. [11])

Advantages and Disadvantages of the Five-Day Week. During the last few years the five-day week system has been adopted in an increasing number of factories in Great Britain. It has certain manifest advantages both to the workers and to the managers. The workers get a free Saturday, which enables the men to work in the open air on their allotments and in their gardens, and to amuse themselves by playing games and in other ways. The women mostly do some house work, and they may work so hard that the free day is no holiday at all. Again, the workers are saved the expense of travelling from their homes to the factory in order to do a rather broken and unsatisfactory half day of work. The management are sometimes able to save on overhead charges, as they do not have to keep up the furnace fires and raise steam for a half day's work. Also they have a welcome opportunity for cleaning and repairing the machinery and plant. [5])

It is not surprising, therefore, to find that at factories where the five-day week has been adopted both workers and managers are strongly in favour of the system. At the same time it has considerable objections, which seem to me to outweigh the advantages. As already pointed out, under the 48-hour scheme a 5-day week entails a daily round of 9½ to 9¾ hours of work, whilst a 5½-day week entails only 8¾ hours at a stretch. Whatever the length of the working day, the worker gets into the habit of adapting himself to it, and if the hours are long he undoubtedly works at a slower rate than if they are short. That is to say, on the 5½-day system he works at a rate corresponding to an 8¾-hour day, or $8\frac{3}{4} \times 6 =$ a 52½-hour week, whilst on the 5-day week he works at a rate corresponding to a 57½-hour week. It is true that if he gets over-fatigued by these longer hours he has a longer week end in which to recuperate; but is this a real advantage? It is well known that on Monday mornings, in consequence of the week-end holiday, most workers feel a strong disinclination to return to the daily grind of work, and the output of the factory on Monday is almost invariably smaller than on other days of the week. After a holiday of several days' duration the fall in output and the disinclination to return to work are considerably greater than

on Monday mornings. Hence it follows that a two-day holiday, such as is experienced on the five-day-week system, produces an intermediate effect on inclination to work and on output. Owing to the greater contrast between the pleasures of a two-day holiday and the grind of five long days of work than that produced by a one-day holiday followed by six shorter days of work, it naturally follows that the workers attach an enhanced value to the two-day holiday. But how does it influence their output? Unfortunately there is not, so far as I am aware, any exact evidence on the subject, but I venture to predict that if a careful comparison could be made between the output attained under the 5-day and the 5½-day systems, it would usually prove to be in favour of the latter system, and especially so if the output related to women, as they cannot stand long hours of work so well as men.

REFERENCES.

[1]) Abbé, "Gesammelte Abhandlungen," Vol. 3, 1906.

[2]) Florence, P. S., "The Forty-Eight Hour Week and Industrial Efficiency." International Labour Review, Vol. X, pp. 729-758, 1924.

[3]) Milhaud, E., "The Results of the Adoption of the Eight-Hour Day." International Labour Review, Vol. XII, pp. 820-853, 1925, Vol. XIII pp. 175-210, 1926.

[4]) Mather W., "The Forty-Eight Hours Week." Manchester, 1894.

[5]) "Report of Chief Inspector of Factories for 1925," pp. 1-139. London 1926.

[6]) Smith, M. and Vernon, M. D., "The Two-Shift System in Certain Factories". Report No. 47 of Industrial Fatigue Research Board. pp. 17-30. 1928.

[7]) Vernon, H. M., "Industrial Fatigue and Efficiency", p.p. 1-264. London, 1921.

[8]) Vernon, H. M., "Fatigue and Efficiency in the Iron and Steel Industry." Report No. 5 of Industrial Fatigue Research Board. pp. 1-99. 1920.

[9]) Vernon, H. M., "The Speed of Adaptation of Output to Altered Hours of Work." Report No. 6 of Industrial Fatigue Research Board. pp. 1-99. 1920.

[10]) Vernon, H. M. and Bedford, T., The Influence of Rest Pauses on Light Industrial Work." Report No. 25 of Industrial Fatigue Research Board. pp. 1-20. 1924.

[11]) Vernon, H. M. and Vernon M. D., "Five-Hour Spells for Women, with Reference to Rest Pauses." Report No. 47 of Industrial Fatigue Research Board. p.p. 1-16. 1928.

ARBEIT UND ARBEITSBEDINGUNGEN

VON ERICH LÜBBE, VIZE-PRÄSIDENT DER I.R.I., VORSITZENDER DES GESAMTBETRIEBSRATES DER SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT.

Ein Gefühl der Beklemmung erfasst mich, wenn ich im Kreise von so viel Kapazitäten über ein Gebiet sprechen soll, das von Hunderten von Ausschüssen untersucht wird und zwar untersucht wird mit allen Mitteln der wissenschaftlichen Methodik und Technik.

Ein Wissenschaftler würde vielleicht das Gebiet Arbeit und Arbeitsbedingungen tiefgründig und mit wissenschaftlicher Logik bei der Entwicklung der Menschheit zu erläutern anfangen müssen. Mir selbst schenken Sie wohl einen derartigen Aufbau und entschuldigen bei meinen Ausführungen, wenn ich nicht mit strenger Logik den Aufbau meiner praktischen Darstellungen durchführe.

Lassen Sie mich mitten hineinspringen in die praktische Wirklichkeit und Ihnen gleich anfangs sagen, welche Auffassung die Arbeiterschaft über all dass wissenschaftliche Studium ihrer Arbeitsbedingungen hat. Mir wird in der praktischen Wirklichkeit seitens der Arbeiterschaft immer wieder entgegengehalten: je mehr Ausschüsse sich mit der Prüfung der Arbeitsbedingungen beschäftigen, je schlechter wird die Arbeit für den Arbeiter. Und wenn ich Ihnen gleich selbst mein persönliches Urteil über die Berechtigung einer derartigen Auffassung der Arbeiterschaft sagen darf, so fälle ich mein Urteil dahin, dass es ganz zweifellos ist, dass den wesentlichsten Nutzen aus den Prüfungsergebnissen tatsächlich nicht die Arbeiterschaft hat.

Wenn wir uns die Arbeit selbst ansehen, so unterscheiden wir drei Arbeitsmethoden und zwar:

1. die Handarbeit ohne jedes technische Hilfsmittel, lediglich unter Zuhilfenahme handlich betriebener Werkzeuge;
2. die Arbeit unter Zuhilfenahme der Maschinen;
3. die Einstellung der Maschinen als Ersatz für den Arbeiter mit nur geringen Handgriffen für den Menschen und die Arbeit am Fliessband.

Die ersten beiden Arbeitsmethoden können zusammengefasst werden, und man kann, wenn auch mit Einschränkung, behaupten, dass die Intensität der Arbeit bei der Betätigung nach diesen Methoden durch den Arbeiter selbst bestimmt wird, der naturgemäss seinen Antrieb erhält durch die Vorarbeiter, Aufseher oder Meister, die in den Arbeitsprozess selbst eingeschaltet sind.

Die Arbeitsintensität, die die Arbeitsleistung bestimmt, ist weiter abhängig von dem Arbeitswillen des Einzelnen. Dieser Arbeitswille ist beeinflusst von den verschiedensten Faktoren. Ich darf darauf hinweisen, dass ein Blatt, das Herr von Haan uns überreicht hat, schon eine Aufzeichnung vieler dieser Faktoren enthält, und kann mich darauf beschränken, aus der praktischen Erfahrung einzelne dieser Faktoren zu unterstreichen.

Gehindert wird der Arbeitswille des Einzelnen zunächst einmal durch Einflüsse, die ausserhalb der Arbeit liegen, und ich nenne hier in erster Linie den Familieneinfluss. Dieser Familieneinfluss kann sowohl hindernd als auch stärkend in Erscheinung treten. Hat ein Arbeiter viel Kummer und Sorgen in der Familie, so wird ihm dadurch die Freude am Leben geschmälert und damit auch die Freude an der Arbeit und der Wille zu derselben. Weitere Faktoren zur Minderung der Arbeitsfreude sind Krankheit, unfreundliche Arbeitsplätze, unbefriedigender Umgang mit den Arbeitskollegen, u. a. m.

Das besondere Gebiet der Entlohnung in seiner Auswirkung auf den Arbeitswillen wird besonders behandelt werden.

Auch die Arbeitszeit ist von Einfluss auf den Arbeitswillen der Belegschaft . Ueber die prinzipielle Frage der Länge der Arbeitszeit (8-Stundentag, 7-Stundentag) will ich hier nicht sprechen, denn diese Frage wird ja noch ganz besonders auf dieser Tagung behandelt werden. Ich will Ihnen nur an einem Beispiel zeigen, wie stark sich die Arbeiterschaft mit der Arbeitszeitfrage selbst, der Arbeitszeit und ihrer Einteilung beschäftigt.

Die deutschen gesetzlichen Bestimmungen verlangen in den Betrieben, in denen Frauen beschäftigt werden, bei einer länger als achtstündigen Arbeitszeit eine einstündige Mittagspause für die Arbeitnehmerschaft. Die Einführung dieser einstündigen Mittagspause aber stiess in der Nachkriegszeit in vielen Betrieben auf den lebhaften Widerstand der Arbeitnehmer. Wissenschaftlich wurde auch von den der Arbeitnehmerschaft nahestehenden Hygienikern und Aerzten immer wieder darauf hingewiesen, dass eine pausenlose Arbeitszeit auf die Dauer gesundheitsschädigend wirke. Trotzdem wurde aber in der Praxis immer wieder verlangt, dass die Pausen so kurz wie möglich festgesetzt würden, damit für die Arbeitnehmerschaft der Aufenthalt in den Betrieben so kurz wie möglich gehalten werden könne. Ein Urteil darüber, ob diese

Verkürzung der Pausen sich tatsächlich in der Praxis für den Gesundheitszustand der Arbeiterschaft schädlich auswirkt, lässt sich naturgemäss von den Betriebsvertretungen nicht abgeben.

Wir kommen nun zu den Gebieten, die auf den Arbeitswillen der Belegschaft einen steigenden Einfluss haben. Den weitaus grössten Anteil, ja beinahe den beherrschenden Einfluss hat hierbei die Entlohnung. Man kann wohl nicht mit Unrecht sagen, dass all die einzelnen Motive, die man in der Richtung der Steigerung des Arbeitswillens findet, letzten Endes zurückgehen auf den Gedanken, wie kann ich meinen Anteil an dem Arbeitsprodukt vergrössern. In unserer jetzigen Wirtschaftsform ist die Arbeitskraft zur Ware geworden und wie jeder Kaufmann versucht, seine Waren mit möglichst grossem Nutzen abzusetzen, so versucht dies auch der Arbeiter. Haben die Arbeiter es in der Vorkriegszeit verstanden, durch festen Zusammenschluss bei einer guten Konjunktur dem Arbeitgeber einen höheren Anteil am Produkt abzunehmen, so haben die Unternehmer ihre Schwäche sehr bald erkannt und haben durch festgefügte Organisationen der Macht der Arbeiter ihre geschlossene Macht entgegengesetzt. Für die Arbeiterschaft ist also heute nicht nur eine gute Konjunkturlage die Voraussetzung zur Erreichung besserer Lohn- und Arbeitsbedingungen, sondern auch die Abwägungen des gegenseitigen Kräfteverhältnisses der Organisationen.

Die aus dem gegenseitigen Abwägen der Kräfte eintretenden Wirtschaftskämpfe führen oft zu grossen Härten und Schärfen für beide Parteien und es ist ein Vorzug der I. R. I. die, bei Anerkennung der gegenseitigen Standpunkte, versuchen kann durch die Ausnutzung der Verhandlungsmöglichkeiten doch noch manche Verständigung herbeizuführen. Um nach der letzten Richtung hin alles tun zu können. was möglich ist, muss die I. R. I. auch versuchen die Materie genau zu erkennen.

Bei der Behandlung des Lohn-Themas muss man dabei zunächst die Entlohnungsform untersuchen. Die Entwicklung der Lohnform ist bekannt. So hatten wir auch bei manuellen Handarbeitern in früheren Jahrzehnten und Jahrhunderten Wochenlohn, ja sogar Monatslohn, oftmals noch verbunden mit sogenanntem Deputat. Eine Erhöhung des Einkommens war meist abhängig von einer Erhöhung der Leistungen. Diese wiederum lag in der Initiative des Einzelnen, da Werkzeuge und Maschinen nur in ganz beschränktem Umfange zur Verfügung standen. Mit

der Entwicklung der Industrie in der Mitte des vorigen Jahrhunderts genügte die freiwillige Leistungssteigerung den Unternehmern nicht mehr und es wurde die Stücklohn-Arbeit eingeführt. Damit verschwand natürlich mehr und mehr die Bezahlungsform in Wochen- und Monatslohn und die stundenweise Bezahlung der Arbeiterschaft wurde üblich. Wer in Deutschland an der Einführung der Stücklohn- oder Akkordarbeit mitgewirkt hat, weiss, welchen Widerstand und welche Unbefriedigung diese Arbeitsform bei der deutschen Arbeiterschaft ausgelöst hat. „Akkord ist Mord", war das Schlagwort, unter dem sich die Arbeiterschaft gegen die Akkordarbeit zusammenfand.

Die Entwicklung des Wirtschaftslebens und die rapide Entwicklung der Industrie zwang aber die Arbeiterschaft, sich mit dieser Entlohnungsform abzufinden und heute muss sich der Kampf der Gewerkschaften in den meisten Fällen nur noch auf eine Abwehr der Auswüchse dieses Systems beschränken.

Die Preisfestsetzung bei der Akkordarbeit geschah in früherer Zeit so, dass der Meister auf Grund seiner eigenen praktischen Erfahrungen und unter Zuhilfenahme von irgendwelchen festen Regeln den Preis festsetzte. Ueber die Höhe dieses Preises wurde dann seitens des Arbeiters mit dem Meister herumgefeilscht, bis irgend eine Einigung gefunden wurde. Es gab keine wissenschaftlichen Feststellungen, sondern es waren Erfahrungswerte, die benutzt wurden.

Die Anwendung der Taylor'schen Methode führte auch in Deutschland schon vor dem Kriege zur Anwendung der Stoppuhr. Dass man die Anwendung der Stoppuhr gerade als wissenschaftlichen Versuch ansprechen könnte, möchte ich nicht behaupten und die grobe Auswertung der Ergebnisse löste auch den heftigsten Widerstand der Arbeiterschaft aus. Es ist vielleicht nicht ganz uninteressant, die Frage aufzuwerfen, wie stehen die Arbeiter jetzt zur Stoppuhr? Die Auffassung hierüber ist in der Arbeiterschaft sehr geteilt und ich habe dabei den Eindruck, dass die Art und Weise, wie der Kalkulant seine Feststellungen macht, nicht unerheblich für die Einstellung des Arbeiters ist. So wurde mir zum Beispiel von einem Streik Mitteilung gemacht, der bis zur Arbeitseinstellung führte. In einer Abteilung eines grösseren Unternehmens legten die Arbeiterinnen einfach die Arbeit nieder, weil der Kalkulant mit der Stoppuhr in der Hand versuchte, Zeitfeststellungen zu machen und es bedurfte grosser Bemühungen, die Schwierigkeiten zu beheben. In anderen Abteilungen wieder nimmt der Kalkulant ganz offen seine Messungen vor,

ohne dass der geringste Streit entsteht. Immer wieder werden die Beschwerden darüber laut, dass die Griffzeiten, zum Beispiel Stahl ein- und ausspannen, Werkzeug holen u.s.w., oder aber die Materialfehler nicht berücksichtigt werden. Wenn der Kalkulator diese Faktoren objektiv berücksichtigt und auch vernünftig im Streitfalle Aufklärung gibt, dann tritt auch eine gewisse Befriedigung der Arbeiterschaft ein.

In dieser Beziehung möchte ich auf menschliche Eigenschaften hinweisen, die gerade bei der Akkordarbeit mehr zum Ausdruck kommen, als man im allgemeinen anzunehmen gewillt ist. Die meisten Menschen besitzen einen gewissen Ehrgeiz und auch die Arbeiterschaft besitzt den Ehrgeiz, dem Kalkulator, der sich alle Mühe gegeben hat, ein Arbeitsstück objektiv auszuwerten, zu beweisen, dass er sich doch verrechnet habe. Diese Tatsache führt dann zu Spitzenverdiensten und gerade hier werden oftmals seitens der Arbeitgeber die grössten Torheiten gemacht, indem man immer wieder und wieder die Akkordpreise reduziert und auf diese Weise den Arbeitern das Vertrauen in eine gerechte Bewertung der Arbeitsleistung nimmt. Wenn die Arbeiterschaft von vornherein einsieht, dass es einfach unmöglich ist, den oben geschilderten Ehrgeiz auswirken zu lassen, dann ist von Anfang an eine Unbefriedigung bei der Arbeit vorhanden.

Neben der Akkordarbeit existieren in Deutschland noch eine Reihe von anderen Preisfestsetzungs-Systemen . Ob es ideale Systeme gibt, die unter allen Umständen den Arbeitern eine Befriedigung bei der Arbeit geben, kann ich nicht sagen, ich kenne keins. Es wurden in Deutschland Prämien-Systeme eingeführt, die darauf basieren, dass man nicht nur eine Prämie zahlt auf die Quantität der Arbeit, sondern auch auf die Qualität derselben. Nach Mitteilungen, die mir gemacht worden sind, hat dieses System sich in der Glühlampen-Industrie gut eingeführt. Ich hörte auch etwas über das sogenannte Bedeaux-System, das seit einigen Jahren in Deutschland Eingang gefunden hat, kann aber über dieses System nichts sagen. Es würde mich selbst interessieren, etwas über dieses System zu erfahren und ich würde es begrüssen, wenn die Herren, die hier anwesend sind, sich über ihre Erfahrungen äussern würden.

Die letzte und modernste Arbeitsmethode ist die Arbeit am Fliessband. Ueber diese Arbeitsweise ist ja sehr viel dafür und dagegen gesprochen und geschrieben worden. Wenn man die Dinge aus der Praxis heraus beurteilt, so glaube ich, dass

man an der Tatsache nicht vorbeigehen kann, dass die Monotonie der Arbeit von vielen Menschen einfach nicht ertragen werden kann. Die Arbeitsintensität ist am Fliessband nicht mehr abhängig vom Willen des Einzelnen, sondern das Tempo wird bestimmt von der Betriebsleitung, die in ihren Dispositionen von der Gesamtheit der am Fliessband Beschäftigten und von der günstigsten Durchorganisation der Einzelarbeiten abhängig ist. Wenn so der Wille des Einzelnen vollkommen ausgeschaltet ist, dann muss naturnotwendig die Frage auftauchen, ob für den Einzelnen überhaupt eine Befriedigung an der Arbeit noch gefunden werden kann. Wenn ich dabei eingangs ausgeführt habe, dass die Monotonie dieser Arbeit von vielen Menschen nicht ertragen werden kann, so darf doch andererseits nicht verkannt werden, dass es eine grosse Zahl von Arbeitnehmern gibt, die gar nicht gewillt sind selbständig zu denken und zufrieden sind, wenn ihnen die Handgriffe genau gezeigt und vorgeschrieben sind, sodass sie tatsächlich vielfach bei der Arbeit ihren eigenen Gedanken nachhängen können. Gerade diese Betrachtung zeigt, dass es mehr als sonst bei irgend einer anderen Arbeitsform beim Fliessband notwendig ist, dass die Menschenauslese richtig vorgenommen wird.

Wenn wir so die einzelnen Arbeitsformen kennen gelernt haben soll nunmehr untersucht werden ob dem Arbeitnehmer hierbei eine gewisse Befriedigung geschafft werden kann. Untersucht man die einzelnen Voraussetzungen hierzu, kommt man immer wieder zu der Erkenntnis, dass die Grundbedingung für die Auslösung der Berufsfreude die richtige Berufswahl ist, und in den politischen Wirrnissen und bei den wirtschaftlichen Schwierigkeiten, unter denen die Arbeiterschaft lebt, ist es beinahe vermessen von einer Berufsfreude zu sprechen. Aber trotzdem muss man erkennen, dass doch bei einem grösseren Teil der Arbeiterschaft als man anzunehmen bereit ist, etwas ähnliches wie eine Berufsfreude existiert. So hat der Handarbeiter vielfach Freude an der Arbeit, die vor allen Dingen dadurch gesteigert werden kann, wenn er in der Lage ist, die Bedeutung seines Produktes zu erkennen. Der Maschinenarbeiter hat Freude am Laufen seiner Maschine. Sehr viel schwieriger ist es schon von einer Freude bei der Fliessbandarbeit zu sprechen. Es gibt auch da vielleicht noch Befriedigungskomplexe bei einzelnen, die auf dem Ehrgeiz basieren, das bestimmte Arbeitsquantum in einer möglichst kurzen Zeit auszuführen. Notwendig erscheint auch

die Einführung einer 10-minütlichen Pause nach stündlicher Arbeitszeit.

Bei der Betrachtung der Befriedigungserscheinungen bei der Arbeit im Betriebe kann man aber nicht nur die Betätigung im Betriebe selbst berücksichtigen, sondern man muss auch alle damit im Zusammenhang stehenden Verhältnisse betrachten. Dabei ist sofort die Frage ausreichender bezahlter Ferien von Bedeutung. Nur zögernd setzt sich in der Wirtschaft die Erkenntnis durch, dass der Arbeiter in der Werkstatt die Ferien zur Erholung seines Körpers genau so notwendig braucht, wie der Angestellte, dem man sie viel früher zuerkannt hat.

In diesem Zusammenhange kommen wir auch auf die behandelte Frage der 5-Tage-Woche zurück. Der Vorschlag der 5-Tage-Woche ist ja mehrfach diskutiert worden. Unter anderem findet auch Herr Dubreuil keine Vorteile in der Verlängerung der täglichen Arbeitszeit. Herr Mars ist der Ansicht, dass ein täglicher Kräftewechsel im Körper erfolge, sodass man eigentlich von einer wöchentlichen Ermüdung bei der Arbeit nicht sprechen könne. Diesen Ausführungen kann ich mich nicht anschliessen, denn dann brauchten wir überhaupt keinen Sonntag mehr und auch keine Ferien.

Bei dem Vortrag über das 5-Tage-System wäre mir etwas mehr Material über die praktischen Auswirkungen aus den amerikanischen Verhältnissen interessant gewesen. In Deutschland zeigen sich nur geringe Ansätze des Versuches der 5-Tage-Woche. Deutschland hat unter heftigsten Kämpfen erst den 8-Stunden-Tag erhalten. Die deutsche Arbeiterschaft würde also ein heftiger Gegner der Verlängerung der Arbeitszeit an sich sein und wenn die 5-Tage-Woche nur unter Beibehaltung der 48-Stunden-Woche erreicht werden kann und nur dadurch, dass dann an den übrig bleibenden Tagen der Woche ca. 9¾ Stunden gearbeitet werden soll, so ist dieser Vorschlag für Deutschland undiskutabel. Rechnet man zu dieser 9¾-stündigen Arbeitszeit noch einen durchschnittlichen Weg für den Verkehr von rund 1 Stunde und 1 Stunde für die Pausen dazu, so kommt man insgesamt auf eine Arbeitszeit von ca. 12 Stunden. Eine derartige Arbeitszeit ist aber vollkommen undiskutabel. Es wäre vielleicht möglich dass die Arbeiterschaft bereit wäre, zu Gunsten eines vollkommen freien Sonnabends, an einzelnen Arbeitstagen 9 Stunden zu arbeiten. Damit wäre die Gesamt-Wochen-Arbeitszeit auf 45 Stunden herabgemindert, was im Zeitalter der Rationalisierung

für eine Volkswirtschaft kaum tragbar ist. Ueber diese 9 Stunden aber an einzelnen Wochentagen hinauszugehen halte ich, auch aus praktischen Erwägungen heraus, für unmöglich, da schon bei 9 Stunden täglicher Arbeitszeit das Optimum an Arbeitsleistung nur unter Berücksichtigung auf den vollkommen freien Sonnabend erreicht werden kann. Bei Einhaltung der 48-stündigen Arbeitswoche sehe ich keine Möglichkeit, die 5-Tage-Woche einzuführen.

Auf einen anderen Punkt möchte ich noch hinweisen, der die Möglichkeit bietet, der Arbeiterschaft Befriedigung zu geben, wenigstens einem kleinen Teil derselben; das ist Aufstiegsmöglichkeit innerhalb des Betriebes. Gerade im Zeitalter der rationalisierten Arbeitsmethoden geht der Unternehmer oft über eigene tüchtige Leute seines Unternehmens hinweg und besetzt die führenden Stellungen mit fremdem Personal. Zweifellos ist dies bei einzelnen Dingen oftmals geboten, aber bei gutem Willen und bei richtiger Betriebspsychologie liesse sich manche Härte und damit manche Unlust bei den übergangenen Arbeitnehmern vermeiden.

Wenn ich meine praktischen Ausführungen mit dem Hinweis auf den Widerwillen der Arbeiterschaft gegen die vielen Ausschüsse begonnen habe, so darf ich sie beenden mit dem Wunsche, dass die I. R. I. dazu beitragen möge, dass die Erkenntnisse, die in den Ausschüssen gesammelt werden, auch ihre praktische Auswirkung für die Arbeiterschaft finden. Nur wenn der gesamten Arbeitnehmerschaft aus der Rationalisierung Vorteile und Verbesserungen entstehen, wird die gesamte Volkswirtschaft auf die Dauer die Nachteile, die die Rationalisierung für breite Arbeitnehmerschaften mit sich bringt, tragen können, und so wird es mit zu den schönsten Aufgaben der I. R. I. gehören, der Arbeitnehmerschaft den Boden ebnen zu helfen, um auch in den Genuss der möglichen Vorteile zu gelangen.

DIE MITARBEIT DER ARBEITERSCHAFT IN DER RATIONALISIERTEN INDUSTRIE

VON HANS MARS, REFERENT FÜR ARBEITSWISSENSCHAFT UND RATIONALISIERUNGSPOLITIK DER KAMMER FÜR ARBEITER UND ANGESTELLTE IN WIEN.

Uns interessiert hier nur die Mitwirkung der Arbeiterschaft bei der Rationalisierung der Betriebe, d.h. also bei der Rationalisierung der Güterproduktion und des Gütertransportes zum Kunden, sowie der Rationalisierung der Tauschvorgänge am Markte.
Würde es sich nur darum handeln, die richtige Form der Mitwirkung zu finden, so könnte die Antwort sehr leicht sein. Es gibt gegenwärtig schon eine Unmenge von Ausschüssen, Wirtschaftsräten und sonstigen Organen, in denen Arbeitnehmer- und Arbeitgebervertreter zusammenkommen, um über die verschiedensten Probleme der Wirtschaft, bezw. Rückwirkungen der Wirtschaft auf die darin beschäftigten Menschen miteinander zu verhandeln. Wir werden nunmehr versuchen, einen Ueberblick über die Unzahl dieser verschiedenen Organe der Wirtschaft zu gewinnen.
Am besten dürfte es sein, wenn wir alle diese näher zu betrachtenden Organe in zwei grosze Gruppen einteilen und zwar in jene Organe, welche auf grund privater Vereinbarungen zwischen Unternehmer und Arbeitnehmer zustande kamen und jene, die auf staatsgesetzlicher oder völkerrechtlicher Grundlage entstanden sind.

Betrachten wir zuerst die auf privatrechtlicher Grundlage errichteten Organe. Man wird gut tun, sie in innerbetriebliche, überbetriebliche und internationale zu scheiden.

I. INNERBETRIEBLICH.

1. Wo Betriebsräte nicht gesetzlich verankert sind, wie in U.S.A. und England, müssen die auf privater Grundlage aufgebauten Betriebsausschüsse an erster Stelle genannt werden. Das auf privatrechtlicher Grundlage beruhende Gegenbild zu den gesetzlich eingeführten Betriebsräten in Deutschland, Oesterreich nimmt manchmal sehr interessante Formen an. So hat Miss Odencrantz in einem Memorandum für den heutigen Tag mitgeteilt, dasz in einem amerikanischen Betriebe der Bekleidungsindustrie ein "piece rate committee" (Stücklohnausschusz) eingesetzt wurde und die Stücklohnfestsetzung im Interesse der Unternehmer und Arbeitnehmer zu überwachen hat. Ebenso be-

steht in manchen amerikanischen Betrieben ein "apprenticeship committee", das man im Deutschen als Anlern- und Lehrlingsausschusz bezeichnen kann.

2. Die Begutachtungsausschüsse für Rationalisierungsvorschläge sind auch in Deutschland und Oesterreich neben den gesetzlichen Betriebsräten tätig, wohl aber haben die Betriebsräte vielfach auf ihre Zusammensetzung Einflusz. Welche Aufgaben diesen Begutachtungsausschüssen gestellt sind, ist allgemein bekannt. Um ein gutes Arbeiten zu gewährleisten, müszten an die Zusammensetzung und Methoden dieser Ausschüsse mehrere Forderungen gestellt werden.

Prinzipiell sollen paritätische Begutachtungsausschüsse für Rationalisierungsvorschläge eingesetzt werden, wobei irgend ein Antrag bei Stimmengleichheit als abgelehnt gilt. Es könnten daher jederzeit die Unternehmervertreter oder die Arbeitnehmervertreter einen Antrag zu Fall bringen. Die bisher bekannt gewordenen Begutachtungsausschüsse hatten entweder gar keinen Arbeitervertreter, oder es waren die Arbeitnehmervertreter stark in der Minderheit, d.h. man hatte ihnen eigentlich immer nur beratende Funktion zugebilligt. Jedermann weisz aber, dasz niemals Begeisterung für eine Sache herrschen kann, in der man nicht mitstimmen, sondern höchstens in sehr untergeordneter Form mitwirken kann. Wie ganz anders könnten und würden sich die Arbeitnehmervertreter für die Rationalisierung einsetzen, vorausgesetzt, dasz die Bedingungen zur Mitarbeit überhaupt vorliegen, wenn sie nicht nur die Möglichkeit haben gutzuheiszen, sondern auch zu verwerfen. Erst dann würden sie sich nicht mehr als Subjekt der Rationalisierung fühlen. Die Unternehmer hätten zu fürchten, dasz gewisse Vorschläge abgelehnt würden, die sie gerne geneigt wären, anzunehmen, aber dafür haben sie wieder den Vorteil, dasz die Vorschläge, für die auch die Arbeitnehmervertreter stimmten, mit ganz anderer Energie durchgeführt würden als bisher.

Von Wichtigkeit ist, dasz einzelne Arbeitnehmer unter Umgehung ihrer unmittelbaren Vorgesetzten Vorschläge machen können, damit der unmittelbare Vorgesetzte den Vorschlag nicht etwa unterschlage oder durch üble Kritik beseitigt. Die Geheimhaltung des Namens des Einreichers ist aus bekannten Gründen zu empfehlen. Den Vorschlagenden sollten Stenotypistinnen, Zeichner und notwendige Informationen zur Verfügung gestellt werden, die sie zur Ausarbeitung ihrer Vorschläge nötig haben. Die Vergütung der Vorschläge sollte sich in Anlehnung an Schutzgesetze

für Angestellten Erfinder nach der Höhe der wirtschaftlichen Auswertung der Idee durch das Unternehmen richten. Für Streitigkeiten über die Höhe der Vergütung könnte man leicht einen Schlichtungsausschusz einsetzen.

Wie mitgeteilt wird, haben auch die Russen für Rationalisierungsvorschläge Prämiierungsfonds geschaffen. Sie werden aus den Jahresersparnissen bei der Durchführung von Rationalisierungsmasznahmen gespeist. Bis zu 50 % davon werden zur Prämiierung, bis zu 15 % zur Unterstützung bei Experimenten und zur Verwirklichung des Vorschlages und bis zu 25 % für Veranstaltungen und Ausstellungen, Wettbewerbe und Kurse, die alle dem Rationalisierungsgedanken dienen, benützt. Der Rest wird zur Vermehrung des Fonds und für Verwaltungskosten verwendet.

Man wird gut tun, den Arbeitnehmern zu erlauben, sich im eigenen Betriebe von Rationalisierungsexperten ihrer Gewerkschaft beraten zu lassen. Das sollte ein wesentlicher Bestandteil des Vorschlagsystems sein. Die Rationalisierungsexperten der Gewerkschaften haben gewöhnlich einen gröszeren Weitblick als die eigenen Betriebsmitglieder, anderseits auch einen bessern Blick für Konfliktstoffe. Sie sind oft imstande, eine unvernünftige Opposition am Entstehen zu hindern und einen zukünftigen Konflikt dadurch abzuschwächen, dasz sie den Konfliktstoff noch bevor der Unternehmer Kapital investierte, als solchen deklarierten. Für den Unternehmer kann diese loyale Mitwirkung von auszen nur von Vorteil sein.

3. Betriebsversammlungen, in denen Produktionsfragen und Rationalisierungsfragen besprochen werden, sind in einigen Betrieben eingeführt worden. Auf dem Cambridger Congress haben wir von dem Versuch der Ohio Brass Co. in Mansfield (Ohio) gehört. Die Gesellschaft läszt während der Arbeitszeit Vorträge über Personalwesen, Produktion, Verkauf, Reklame, Kalkulation und andere Betriebsprobleme veranstalten, auch werden die Arbeiter in Gruppen zu je 8 Mann durch die Betriebe geführt, um einen Einblick aus eigener Anschauung zu gewinnen. Diese Information über den Betrieb findet während der Arbeitszeit statt. Am weitesten ging Russland in der Organisation solcher Betriebsversammlungen über Produktionsprobleme. Diese Versammlungen heissen dort Produktionsberatungen.

4. Arbeitnehmer und Unternehmer arbeiten in manchen oder einigen Betrieben an der Schaffung von Betriebsausstellungen zusammen, über die Herr Kommerzialrat Hugo Meinl

berichten wird. Ganz kurz angedeutet dienen diese Betriebsausstellungen demselben Zweck wie die soeben angeführten Betriebsversammlungen. In der Ausstellung soll das Material, die einzelnen Verarbeitungsstoffe in natura gezeigt werden, Musterentwürfe, Firmengeschichtliches, Tourenkarten der Reisenden, Betriebsformulare, Reklamemittel und verschiedene andere auf den Produktionsprozess bezw. das Arbeitsleben sich beziehende Gegenstände ausgestellt werden.

5. Von Amerika ausgehend, sind nunmehr auch schon in Europa in einer groszen Zahl von Betrieben Sicherheitsausschüsse eingesetzt worden, in denen Unternehmervertreter und Vertreter der Arbeitnehmer versuchen, Unfälle zu verhüten.

6. In einigen Fabriken ist die Wohlfahrtspflege so sehr ausgebaut worden, dasz die Betriebsräte ihre Kompetenz in diesen Fragen an eigene Wohlfahrtsausschüsse abgetreten haben, in denen vom Betriebsrat delegierte Arbeitnehmervertreter und Unternehmervertreter Sitz und Stimme haben. Diese Wohlfahrtsausschüsse haben namentlich in einer umwälzend rationalisierten Industrie grosze Aufgaben.

7. In Ländern, in denen eine staatliche Sozialversicherung nicht existiert, findet man eigene Verwaltungsausschüsse für Betriebsversicherung. Diese Verwaltungsausschüsse sind von Unternehmern und Arbeitnehmern beschickt und haben sich in der rationalisierenden Industrie namentlich mit den gesundheitlichen Auswirkungen der Rationalisierung zu beschäftigen. Dasselbe trifft auch für Verwaltungsausschüsse betrieblicher Zuschuszkassen zu.

II. ÜBERBETRIEBLICH.

Die überbetrieblichen, aber noch innerhalb der Grenzen eines Landes bestehenden Organe, in denen Unternehmer und Arbeitnehmer über Produktions- und namentlich Rationalisierungsfragen verhandeln und beschlieszen, sind noch gröszer an der Zahl als die innerbetrieblichen. Nur die wichtigsten seien genannt.

1. Einige der Austauschgruppen für Betriebserfahrungen (kurz Betriebsforschungsgruppen genannt) haben auch Arbeitnehmervertreter hinzugezogen und zwar nicht nur als Angestellte der in den Betriebsforschungsgruppen vertretenen Fabriken, sondern ausdrücklich als Vertreter der in diesen Fabriken beschäftigten Arbeitnehmer.

2. Die deutschen und oesterreichischen Reichswirtschafts-

kuratorien (RKW und OKW) geben gleichfalls Arbeitgeber- und Arbeitnehmervertretern Gelegenheit in erster Linie natürlich Rationalisierungsfragen zu besprechen und eventuell Masznahmen zu ergreifen. Jedem dieser Kuratorien sind eine grosze Zahl von technischen und organisatorischen, menschenökonomischen, pädagogischen u.s.w. Spezialausschüssen angeschlossen, in denen meistens Unternehmer und Arbeitnehmer in gleicher Weise vertreten sind.

3. In Engalnd finden nunmehr schon seit zwei Jahren gemeinsame Konferenzen des Gewerkschaftsbundes und einer Gruppe fortschrittlicher Industrieller unter Führung Lord Melchett's statt, in denen beide Teile bisher schon zu sehr beachtenswerten Arbeitsergebnissen kommen konnten, die eine gemeinsame Lösung von wirtschaftlichen Problemen darstellen, über die früher keine Verständigung möglich erschien. In andern Ländern, so z.B. in Schweden, bestehen ähnliche Einrichtungen. Einzelne Gewerkschaften haben mit den ihnen entsprechenden Unternehmerverbänden ziemlich regelmäszige Zusammenkünfte, in denen gemeinsame Auffassungen und Richtlinien über aktuelle Wirtschaftsfragen formuliert werden.

4. Der Schweizer Verband Volksdienst und der deutsche Ausschusz für soziale Betriebsarbeit stellen eine neutralisierte überbetriebliche Wohlfahrtspflege dar, deren Verwaltung durch Ausschüsse geschieht, in denen Unternehmer- und Arbeitnehmerinteressen so vertreten sind, dasz sie einen neutralen Charakter tragen.

5. In den einzelnen Ländern gibt es eine Reihe von Ausschüssen, Arbeitsgemeinschaften, Vereinigungen, die sich mit dem einen oder dem andern Problem der menschenökonomischen und technischen Rationalisierung befassen. Arbeitnehmer und Unternehmer sind gemeinsam Träger dieser Arbeiten. So existiert in England das National Institute of Industrial Psychology, dessen Direktor uns im vergangenen Jahr einen viel bemerkten Vortrag hielt. In Deutschland und Oesterreich bestehen ähnliche Gebilde, z.B. die Arbeitsgemeinschaft für Psychotechnik in Oesterreich. Die Deutsche Gesellschaft für Gewerbehygiene und Unfallverhütung, der Verein für soziale Technik in Oesterreich, der Deutsche Ausschusz für technisches Schulwesen (Datsch) und die "Beiräte zur Förderung der technischen Hochschulen und

des technischen Museums" sind andere hierher gehörige Beispiele. Die meisten dieser Ausschüsse sind den Kuratorien für Wirtschaftlichkeit angegliedert.

III. INTERNATIONAL.

Verlassen wir nunmehr die Grenzen eines Landes und wenden wir uns den internationalen Gebilden zu, so dürfen wir an erster Stelle gleich die I. R. I. nennen.
Weitere Vereinigungen, über die mein Landsmann Hugo Haan schon am ersten Tage gesprochen hat und die hierher gehören, sind:
2. das Internationale Kommittee für wissenschaftliche Arbeitsorganisation,
3. das Internationale Rationalisierungsinstitut,
4. die Internationale Vereinigung für sozialen Fortschritt.
Diese Aufstellung wird wohl genügen, um die grosze Fülle von Kontaktmöglichkeiten und Verbindungsgliedern zwischen Unternehmern und Arbeitnehmern aufzuzeigen, die einer Aussprache über Wirtschaftsfragen dienen.

Nicht minder grosz ist aber die Zahl der auf staatsgesetzlicher und völkerrechtlicher Grundlage beruhenden Brücken zwischen Unternehmern und Arbeitnehmern.

I. INNERBETRIEBLICH.

Beginnen wir wieder mit den betrieblichen Institutionen.
1. Das oesterreichische Betriebsrätegesetz schreibt monatliche Besprechungen zwischen Unternehmern und Arbeitnehmern auf Wunsch der Arbeitnehmer vor, in denen laufende Betriebsangelegenheiten und Fragen der Betriebsführung besprochen werden können.
2. Dasselbe Gesetz, wie auch das reichsdeutsche Gegenstück, schreibt die Besetzung von zwei Verwaltungsrats-, bezw. Aufsichtsratstellen durch Betriebsratsdelegierte vor.
Würden die Intentionen des Gesetzes verwirklicht worden sein, so müszten die Vertreter des Betriebsrates in diesen Verwaltungsorganen von aktienrechtlichen Wirtschaftsgebilden entscheidend bei Rationalisierungsangelegenheiten mitbeschlieszen können. Dr. Northcott hat uns geschildert, dasz in seiner Fabrik in den geschäftsführenden Verwaltungsratsausschusz ein Vertreter der

Arbeitnehmer aufgenommen wurde, der dort alle jene Funktionen erfüllt, welche die in die oesterreichischen bezw. deutschen Aufsichts- oder Verwaltungsräte entsandten Betriebsratsmitglieder zu erfüllen hätten.

3. Das oesterreichische Betriebsrätegesetz sieht die Einsetzung eines Disziplinarausschusses vor für alle jene Fälle, die der Unternehmer nicht mit sofortiger Entlassung bestrafen will. Der paritätisch zusammengesetzte Ausschusz ist allein berechtigt, Strafen zu verhängen.

II. ÜBERBETRIEBLICH.

Die überbetrieblichen nationalen Institutionen, die auf staatsgesetzlicher Grundlage beruhen, sind in Deutschland und Oesterreich besonders zahlreich.

1. Parlamentarische Ausschüsse, Enqueteausschüsse, verschiedene Beiräte der Regierungen wie Zollausschüsse sind wohl in den meisten demokratisch verwalteten Ländern bekannt. Da die Arbeitnehmer nunmehr in jedem europäischen Parlamente stark vertreten sind, so können auch sie gemeinsam mit den Unternehmervertretern an der Gestaltung einer grosszügigen Wirtschaftspolitik mitarbeiten.

2. Der Reichswirtschaftsrat in Deutschland musz gleich als zweite Institution angeführt werden. Obzwar seine Tätigkeit vorderhand begutachtend ist und sich in öffentlichen Debatten und Entschlieszungen erschöpft, hat er schon viel dazu beigetragen, Unternehmer und Arbeitnehmer zu gemeinsamen Auffassungen über grundlegende Wirtschaftsfragen zu bringen.

3. Die in Oesterreich bestehenden gesetzlichen Interessenvertreter der Unternehmer, kurz Handelskammern genannt, und die dort gleichfalls bestehenden gesetzlichen Interessenvertretungen der Arbeitnehmer, kurz Arbeiterkammern genannt, haben die Möglichkeit, zu gemeinsamen Beratungen zusammenzukommen. Wohl sind bisher noch keine gemeinsamen Plenarversammlungen vorgekommen, doch haben die einzelnen Ausschüsse dieser genannten Kammern gemeinsame Sitzungen abgehalten. Auch sind die in den Büros der beiden Kammern tätigen Fachreferenten in steter Fühlung über eine grosze Zahl der beide Kammern betreffenden Probleme. Namentlich haben sich die gemeinsamen Beratungen auf wirtschaftlichem und juristischem Gebiete als sehr fruchtbar erwiesen.

4. In einigen Ländern, wie z.B. Finnland, entsenden die Ge-

werkschaften stimmberechtigte Vertreter in die Gewerbeinspektion, ebenso wie die Unternehmerverbände, wodurch beiden Wirtschaftsgruppen Gelegenheit geboten wird, an gewerbehygienischen und die Unfallverhütung betreffenden Masznahmen mitzuwirken.

5. In mehreren Ländern bestehen Beiräte der Arbeitsministerien, in denen nebst andern Institutionen auch Arbeitnehmer- und Arbeitgeberorganisationen vertreten sind. Da die Arbeitsministerien über alle Fragen der Arbeits- und Sozialpolitik sowie Sozialversicherung zu entscheiden haben, ist der Mitwirkung in diesen Beiräten grosze Bedeutung zuzumessen.

6. Die Berufsausbildung der gelernten Arbeiter liegt vielfach in den Händen eigener Berufsschulen (gewerblichen Fortbildungsschulen). In den meisten demokratisch regierten Ländern gibt es eigene Berufsschulräte, in denen wieder Arbeitgeber und Arbeitnehmer vertreten sind, um auf die Gestaltung der Berufsausbildung im Interesse der Produktion und einer weitreichenden Arbeitspolitik Einflusz auszuüben.

7. Mehrere Länder haben Schlichtungsstellen und Arbeits-Behörden der verschiedensten Art eingerichtet, die auf den ersten Blick wohl Arbeitnehmer und Unternehmer nicht zwecks Formulierung von gemeinsamen Auffassungen vereinigen, sondern zwecks Vertretung gegensätzlicher Auffassungen. Selbstverständlich ergibt sich aber in all diesen Schlichtungsstellen schlieszlich eine gemeinsame Grundauffassung über verschiedene Arbeits- und Produktionsprobleme.

8. Ebenso führen natürlich auch die Arbeitsgerichte der verschiedensten Art dazu, dasz die in ihnen vertretenen Unternehmer und Arbeiter zu gemeinsamen Auffassungen kommen. Diese Tatsache ist bisher noch nicht genügend gewürdigt worden. Würde man aber die Entscheidungen der verschiedenen Schlichtungsstellen und Arbeitsgerichte daraufhin untersuchen, wie durch sie die allgemeine Wirtschaftsauffassung und Wirtschaftspolitik der Unternehmer beeinfluszt wurde, so würde das Resultat wohl für viele erstaunlich sein.

9. Im Rahmen der deutschen und oesterreichischen Sozialversicherung bestehen Arbeits- und Berufsberatungsämter, deren Verwaltung zum groszen Teil Arbeitgeber- und Arbeitnehmervertretern anvertraut ist. Auch in den Spitzenorganen für alle Arbeitsämter wie z.B. in dem Verwaltungsrat der Reichsanstalt für Arbeitsvermittlung in Deutschland sind beide Wirtschaftsgruppen vertreten. Durch

diese Organe können Arbeitnehmer und Unternehmer Einflusz auf die Arbeitsmarktpolitik gewinnen und eventuell zu einer gemeinsamen Wirtschaftspolitik kommen, um arbeitsmarktpolitische Ziele zu erreichen.

10. Die verschiedenen Sozialversicherungsinstitute haben bekanntlich Selbstverwaltung. D.h. auch sie werden von den beteiligten Arbeitnehmern und Unternehmern verwaltet. Auf diese Weise lernen Unternehmer und Arbeitnehmer die gesundheitlichen Auswirkungen der Rationalisierung kennen und werden dadurch veranlaszt, auf die Produktionsmethoden entsprechenden Einflusz auszuüben, um ungünstige Einwirkungen hintanzuhalten.

11. In verschiedenen Produktionszweigen Deutschlands und auch Oesterreichs existieren Organe, die wirtschaftliche Funktionen ausüben, so z.B. haben der Reichskohlenrat und die verschiedenen Bauüberwachungsausschüsse eine Reihe von Befugnissen hinsichtlich der Produktionsmethoden, der Preisbildung u.s.w. Unternehmer- und Arbeitnehmervertreter in diesen Organen haben daher auf die Wirtschaftsführung dieser Zweige beträchtlichen Einflusz.

12. Wo staatliche, provinziale oder kommunale, bezw. unter der Kontrolle des Staates, der Provinzen und der Gemeinden stehende Betriebe existieren, haben die politischen Arbeitnehmervertreter gleich den politischen Unternehmervertretern die Möglichkeit auf die Betriebsführung und die Betriebspolitik Einflusz zu gewinnen. Die dort gewonnenen wirtschaftlichen Auffassungen und Erfahrungen können vielfach auf andere Produktionszweige übertragen werden.

13. Schlieszlich ist noch auf ein neues Gebilde in Italien hinzuweisen, in dem die Corporazioni bezw. das Ministerium der Corporazioni Unternehmer und Arbeitnehmervertreter zusammen bringen, um über Wirtschaftsfragen zu verhandeln.

III. INTERNATIONAL.

Auf völkerrechtlicher Grundlage bestehen zwei bemerkenswerte Institutionen.

1. Die internationale Arbeitsorganisation, die die jährlichen Arbeitskonferenzen und das Internationale Arbeitsamt umfaszt.

2. Der beratende Wirtschaftsausschusz des Völkerbundes, der als dauerndes Ergebnis der Weltwirtschaftskonferenz eingesetzt wurde.

Auch die auf staatsrechtlicher und völkerrechtlicher Grundlage bestehenden Verbindungsglieder zwischen Arbeitnehmern und Unternehmern sind daher in mindestens ebenso groszer Zahl vorhanden wie die auf privatrechtlicher Grundlage bestehenden.

Es gibt also schon genug Möglichkeiten für Arbeitnehmer und Unternehmer über Wirtschaftsfragen zu einer Einigung zu kommen. Trotzdem aber dieser grosze Verständigungsapparat besteht, ist in vielen Fragen noch keine Verständigung eingetreten. Die Erklärung dafür liegt darin, dasz der Wille fehlt, sich dieser Verständigungsmaschinerie zu bedienen. Die Frage, die wir heute zu beantworten haben, ist die: Worauf ist dieser mangelnde Wille diese Verbindungsglieder auszunutzen, zurückzuführen?

Wir müssen natürlich auf Unternehmer- und auf Arbeitnehmerseiten nach Gründen suchen. Unter den Arbeitgebern gibt es eine kleine Minorität, die absolut nicht willens ist, sich mit Arbeitnehmern über irgend eine Frage zu verständigen, die die Arbeitnehmer lediglich als lebendige Produktionsmittel betrachtet, die nur deshalb anders als die toten Produktionsmittel behandelt werden, weil es die staatliche Macht erzwingt. Der grosze Teil der Unternehmer jedoch will zu einer Verständigung kommen, das heiszt gewöhnlich auch: will den Arbeitsfrieden.

Unter den Arbeitnehmern gibt es nur äusserst wenige, die jedweder Verständigung über Wirtschaftsfragen prinzipiell abgeneigt sind. Die grosze Masse der Arbeiter ist dazu bereit. Man muss sie aber in zwei Gruppen einteilen. Die kleinere Gruppe der p r i n z i p i e l l v e r s t ä n d i g u n g s b e r e i t e n Arbeitnehmer ist p r i n z i p i e l l a r b e i t s f r i e d l i c h eingestellt, während die andere Gruppe a r b e i t s k ä m p f e r i s c h gesinnt ist, wenn dieser Ausdruck gestattet ist.

Die arbeitsfriedlichen Arbeitnehmer sind immer ohne weiteres bereit an einem Vorschlagssystem mitzuarbeiten. Sie schätzen ihr Mitspracherecht als ein Entgegenkommen des Unternehmers und sind mit einem Minderheitsstimmrecht in einem Begutachtungsausschusz für Vorschläge und mit einem Betriebsrat, auch wenn er nur beratende Funktion hat, zufrieden. Da sie grundsätzlich geneigt sind, mit dem Unternehmer zusammen zu arbeiten, hat auch die Form der Zusammenarbeit keine grundsätzliche, sondern nur psychologische Bedeutung. Sie soll die Freude an der Zusammenarbeit steigern.

Nunmehr musz die Einstellung der arbeitskämpferischen Arbeit-

nehmer zur Mitarbeit besprochen werden. Die Darstellung ihres Verhaltens wird uns ausführlich beschäftigen müssen. Ihre Ansichten müssen das Interesse auch jener I. R. I.-Mitglieder beanspruchen können, die selbst mit solchen Arbeitnehmern kaum in Berührung kommen, wie z.B. die Mitglieder der I. R. I. aus den Vereinigten Staaten. Wer vom guten Willen beseelt ist, die Bestgestaltung der menschlichen Arbeit durchzuführen, der wird aus ihrer Kritik gar manche Anregung schöpfen können, die sich durch noch so gründliches eigenes Nachdenken nie ergäbe.

Wir können ohne weiteres sagen, dasz es die Einstellung der arbeitskämpferischen Gewerkschaften zu der Verständigungsmaschinerie ist, die heute den eigentlichen Diskussionsgegenstand bildet, denn die arbeitsfriedlichen Gewerkschaften sind ohne weiteres bereit, diesen Apparat zu benutzen. - Vielleicht darf ich hier einen Moment pausieren, um eine Betrachtung anzustellen, die mir für die Fortentwicklung der I. R. I. wichtig erscheint.

Kein Zweifel, die geistige Einstellung der I. R. I. ist zum Groszteil arbeitsfriedlich. Es wäre aber ein schwerer Fehler, wollte man von jedem Mitglied der I. R. I. diese Einstellung verlangen. In unserer Vereinigung musz selbstverständlich Platz sein für Leute, die den Kapitalismus als die einzig mögliche Wirtschaftsform erachten und nunmehr aus ethischen, religiösen, psychologischen und sozialen Motiven darnach streben, die menschlichen Arbeitsbeziehungen zu verbessern. Sie musz aber auch Platz für Leute haben, die zwischen Arbeit und Privatkapital so starke Interessengegensätze sehen, dasz sie, allgemein menschlichen Regungen folgend, nur bestrebt sein können, die unvermeidliche Spannung in menschlich würdigen und vor allem menschlich erträglichen Grenzen zu halten und jede künstliche Verschärfung energisch zu bekämpfen.

Würde unsere Vereinigung als Hauptaufgabe betrachten, Wirtschaftsfrieden herbeizuführen, so wäre sie überflüssig, denn Religionsvereinigungen der verschiedensten Art, die Rotarybewegung, alle fortschrittlichen Unternehmerorganisationen, die sogenannten Werksgemeinschaften und "gelben" Gewerkschaften, viele politische Parteien die verschiedensten Berufsverbände und viele andere Organisationen haben sich vorwiegend diesem Ziele gewidmet. Die Hauptaufgabe unserer Vereinigung musz die Bestgestaltung der menschlichen Arbeitsbeziehungen sein und bleiben, gleichgiltig, ob sie von wirtschaftsfriedlicher oder anderer

Gesinnung getragen ist.
Fast alle Masznahmen zur Bestgestaltung der menschlichen Arbeitsbeziehungen, die von der I. R. I. ausgearbeitet und vorgeschlagen werden, können nicht nur von streng arbeitsfriedlich eingestellten Arbeitnehmern willkommen geheiszen werden, sondern auch von Arbeitnehmern gelobt werden, die in aller Aufrichtigkeit und Ehrlichkeit dauernde Gegensätze zwischen Arbeit und Privatkapital zu finden glauben. Diese Sachlage hat die I. R. I. auch in ihren Satzungen zum Ausdruck gebracht.

Kehren wir zum Hauptthema zurück, warum die arbeitskämpferischen Arbeitnehmer nicht geneigt sind, den Verständigungsapparat richtig zu benutzen. Auf diese Frage lassen sich drei Antworten geben.
Zunächst besteht zwischen Arbeitnehmern und Unternehmern nicht jenes Vertrauen, das unbedingte Voraussetzung einer Zusammenarbeit mit Hilfe der geschilderten Maschinerie sein musz. Verhandeln Arbeitnehmer und Unternehmer miteinander über grosze Streitfragen, so fragen sich die Arbeitnehmer immer wieder, ob durch die Erklärungen und Gründe, die die Gegenseite vorbringt, wohl die letzten Motive bloszgelegt werden oder ob hinter den Erklärungen und Eröffnungen noch andere Motive versteckt liegen. Unter solchen Umständen kann natürlich die Verständigungsmaschinerie nicht jenes von uns gewünschte Resultat erzielen und wird auch nicht so ausgiebig benutzt werden, wie es wünschenswert wäre.
In einigen Produktionszweigen besteht erfreulicherweise ein starkes Vertrauensverhältnis zwischen Arbeitnehmern und Unternehmern und man sieht auch, dasz die Zusammenarbeit und deren gute Früchte viel gröszer sind als in andern Branchen.
Der zweite grosze Grund, der die arbeitskämpferischen Arbeitnehmer von einer richtigen Inanspruchnahme des Verständigungsapparates abhält, ist die Mentalität der überwiegenden Majorität der Unternehmer. Die Mentalität, die Sentiments, die Terminologie der Arbeitnehmer stellt im Groszen und Ganzen eine Anpassungserscheinung an die Mentalität des Groszteils der Unternehmer dar; wie richtig diese Behauptung ist, kann man daraus ersehen, dasz die Arbeitnehmer in der Schwereisenindustrie und Metallindustrie eine ganz andere Mentalität aufweisen als etwa die Arbeiter in der Lebens- und Genuszmittelbranche. Man kann förmlich dem einzelnen Arbeitnehmer vom Gesicht ablesen, in welchem Pro-

duktionszweig er seine Mentalität entwickelt hat. Die Metallarbeiter z.B. sind ungeheuer misztrauisch, neigen zur Proteststimmung, tragen ständig einen verhaltenen Groll zur Schau u.s.w. In der Lebens- und Genuszmittelbranche sieht man jedoch meistens befriedigte Gemüter. Würden heute die Metallindustriellen, so wie sie sind, auf einmal die gesamte Lebens- und Genuszmittelbranche aufkaufen, so würde bestimmt in kürzester Zeit die Mentalität der Lebens- und Genuszmittelarbeiter jener der Metallarbeiter angeglichen. Verschiedenen historischen Umständen ist es zuzuschreiben, dasz in dem Unternehmertum der Eisen- und Metallindustrie jene Mentalität herrscht, die dann die Arbeitnehmer zwingt, zwecks wirksamer Abwehr die entsprechende Mentalität zu entwickeln.

Da nun die Arbeiterschaft in Anpassung an das Gros der Unternehmer ihre Mentalität entwickelt, so folgt selbstverständlich, dasz sie mit Unternehmern, die von selbst die von den Gewerkschaften aufgestellten Forderungen erfüllen, nichts anzufangen weiss. Ein Arbeitgeber hat uns am ersten Tage mitgeteilt, dasz die Arbeitsbeziehungen in seinem Betriebe dadurch schwierig gestaltet sind, dasz er sich hüten musz, die Arbeiter zu gut zu behandeln. Die Arbeiter wollen förmlich um jeden Preis kämpfen. Kein Zweifel, die Schwierigkeit aus einer zu guten Behandlung würde sofort verschwinden, wenn die Arbeitnehmer nur mit arbeiterfreundlichen Unternehmern zu tun hätten. Ihre Terminologie, ihre Sentiments, ihre Praktiken würden sich ändern, selbstverständlich ohne dasz die unter ihnen, die das privatkapitalistische System ablehnen, diese ihre Haltung aufgeben müszten.

Der dritte Umstand, von dem der Wille, die schon vorhandenen Verbindungsglieder zu den Unternehmern zu benutzen, abhängt, ist die gröszere oder geringere Entfernung von den Zielsetzungen der arbeiskämpferischen Arbeitnehmer. Je näher die gesamte Wirtschaft die Arbeiter an ihre Ziele kommen läszt, desto eher wird die Geneigtheit unter ihnen bestehen, die Verständigungsmaschinerie zu benutzen.

Man darf wohl die Bestrebungen arbeitskämpferischer Arbeitnehmer und ihrer Gewerkschaften in 7 Zielsetzungen übersichtlich zusammenstellen:

1. Wollen sie die Ständigkeit der Beschäftigung sichern und die Arbeitslosigkeit wirksam bekämpfen.
2. Wollen sie das Arbeitseinkommen erhöhen und auch für die Zeit der Arbeitslosigkeit und des Alterns vorsorgen.

3. Wollen sie die Wirtschafts- und Betriebsdemokratie ausbauen.
4. Wollen sie die Arbeitsfreude nach Kräften heben.
5. Wollen sie die Gesundheit der Arbeitnehmer schützen und Erkrankte- und Unfallgeschädigte einer ausreichenden Fürsorge zuführen.
6. Wollen sie die Freizeit und den Urlaub verlängern.
7. Wollen sie das öffentliche Interesse gegenüber dem privaten immer stärker geltend machen.

Die arbeitskämpferischen Gewerkschaften machen ihre Mitarbeit in umwälzend rationalisierten, bezw. sich ständig rationalisierenden Betrieben davon abhängig, ob ihnen in dem betreffenden Betriebe die Erreichung der wichtigsten oder aller 7 vorgenannten Ziele wenigstens annäherungsweise möglich ist.

Wenden wir uns gleich der ersten und wichtigsten Bestrebung zu: Die Ständigkeit der Beschäftigung zu sichern. Die arbeitskämpferischen Gewerkschaften schwören entschieden ab, Maschinenstürmer zu sein. Man würde daher erwarten, dasz sie die unmittelbar nach durchgeführter Rationalisierung eintretende Arbeitslosigkeit, das ist die sogenannte Rationalisierungsarbeitslosigkeit, nicht zum Anlasz nehmen, ihre Mitwirkung zu versagen. In Wirklichkeit hält aber doch die vor allem auf technische Verbesserungen zurückgehende Rationalisierungsarbeitslosigkeit die Arbeitnehmer in den meisten Fällen von der Mitarbeit ab. Schuld daran haben nur jene, die das bekannte Argument von der blosz vorübergehenden Rationalisierungsarbeitslosigkeit nicht wahr werden lassen. Seit die meisten wichtigsten Produkte einer monopolistischen Preisbildung unterliegen, seit die Produktion vieler Produkte aus preispolitischen Gründen absichtlich b e s c h r ä n k t wird, seit die Unternehmer über grosze finanzielle Reserven verfügen, durch die die automatische Preisregulierung der freien Wirtschaft vereitelt wird, seit die Hochschutzzollpolitik den internationalen Warenaustausch hemmt, wurden nach der Rationalisierung der Betriebe die Preise überhaupt nicht oder nur in den seltensten Fällen so gesenkt, dasz ein Mehrabsatz und damit eine Mehreinstellung von Arbeitern möglich gewesen wäre. Diese Sachlage kennt jeder Wirtschaftsbeobachter. Dazu kommt, dasz trotz der Mehrerzeugung, die gewöhnlich im Gefolge der Rationalisierung auftritt, die gesamte in der Volkswirtschaft ausgezahlte Lohnsumme nicht nur nicht gleichbleibt, sondern ständig sinkt. Unter diesen Umständen musz die Rationalisierungsarbeitslosigkeit dauernd sein!

DIE MITARBEIT DER ARBEITERSCHAFT

Natürlich werden Rationalisierungsmasznahmen, die nicht oder kaum die Gefahr der Arbeitslosigkeit heraufbeschwören, z.B. Erschlieszung neuer Absatzmöglichkeiten, Ersparung an Material und Betriebskraft, Verhinderung einer Fehlrationalisierung und Verhinderung einer zwecklosen Entfachlichung durch geistlose Unterteilung der Arbeit, Masznahmen zur Energie- und Ermüdungsersparnis ganz anders beurteilt. Solche nicht sparende Rationalisierungsmasznahmen werden auch von der arbeitskämpferischen Arbeitnehmerschaft jederzeit gefördert.
Auch darf man sagen, dass die arbeitskämpferischen Arbeitnehmer im allgemeinen immer ihre passive Haltung gegenüber der Rationalisierung aufgegeben haben, wenn allgemeine Konjunktur herrscht, in der trotz der miszlichen Waren- und Lohn-Preisbildung die Rationalisierungsarbeitslosigkeit offensichtlich vorübergehend ist. Gute Beispiele sind: Die Konjunkturperiode in Deutschland vom Frühjahr 1927 bis Herbst 1928; die fast ununterbrochene Konjunkturperiode in Frankreich 1925 bis 1929. Während dieser Perioden zeigen sich die Arbeitnehmer im allgemeinen geneigt, an der Rationalisierung mitzutun, obwohl sie nach wie vor arbeitskämpferisch eingestellt bleiben.
Trägt aber die Rationalisierung zur Sicherung der Existenz der Arbeitsnehmer irgend eines Betriebes bei, so wird sie in der Regel von ihnen mit allen Mitteln gefördert. Ein Zusammenarbeiten in produktionstechnischen Fragen tritt in solchen Fällen ein, gleichviel, ob eine Konjunktur- oder eine Krisenperiode vorliegt. So namentlich dann, wenn ein Betrieb genügend Expansionskraft besitzt, um jede Arbeitsersparnis auch sofort wieder durch Bedarf nach mehr Arbeitskraft auszugleichen. Oder wenn einem Betrieb die Stillegung drohen würde, falls er nicht rationalisiert werden würde. Im Falle der drohenden Stillegung helfen viele arbeitskämpferische Arbeitnehmer sogar auch dann mit, wenn einzelne von ihnen dabei arbeitslos werden. Diese Haltung verdient volle Anerkennung.

Der nächste Faktor, der die Arbeitnehmer in ihrer Haltung beeinfluszt, ist der Zusammenhang zwischen Rationalisierung und Entlohnung. Investiert der Unternehmer mehr Kapital, so verlangt er sofort höheren Gewinn. Intensiviert aber der Unternehmer die Arbeit, verlangt er vom Arbeiter im Laufe eines Tages mehr körperliche und seelische Anstrengung, so sollte der Arbeitnehmer im Verhältnis zur Erhöhung seines physischen und psychischen Beitrages zu der Produktionsmenge mehr Lohn erhalten.

Das ereignet sich aber nur höchst selten.

Niemand wird bestreiten, dasz diejenigen, die das Interesse der Produktionsmittel zu vertreten haben, seien es nun Privatkapitalisten, staatliche oder gemeindliche Organe, immer wieder Konflikte, Spannungen, Reibungen, Meinungsverschiedenheiten etc. mit denjenigen haben müssen, die ihre Arbeitskraft so teuer als möglich verkaufen wollen, um sich einen höheren Anteil an den Gütern dieser Welt zu sichern.

Von der Art, wie der Ertrag jedes einzelnen Unternehmens verteilt wird, hängt nicht nur der Wohlstand und das Wohlbefinden des einzelnen Unternehmers oder seiner Arbeitnehmer ab, sondern auch der Wohlstand des ganzen Volkes. Denn sowohl Arbeits-, als auch Kapitalseinkommen haben eine sozialwirtschaftliche Funktion: Das Arbeitseinkommen tritt fast in seiner Gänze als Kaufkraft für Konsumgüter und das Kapitaleinkommen zum überwiegenden Teil als Kaufkraft für Produktionsmittel auf. Eine Verkleinerung des Arbeitseinkommens bei gleichbleibendem oder steigendem Gesamteinkommen hat zur Folge, dasz die Kaufkraft für Konsumgüter abnimmt und die für Produktionsmittel zunimmt. Anscheinend tritt nur eine Absatzverschiebung, nicht aber eine Absatzstockung ein. Aber die Absatzstockung kann nicht ausbleiben, wenn die Rentabilität der neueingestellten Produktionsmittel wegen verschlechterten Absatzes der mit ihrer Hilfe erzeugten Konsumgüter beträchtlich zurückgeht. Aus der Absatzverschiebung wird daher eine Absatzstockung. Dies bedeutet aber Arbeitslosigkeit. Nun läszt sich geradezu statistisch nachweisen, dasz die Ertragsverteilung in nicht privatwirtschaftlichen Betrieben ein für den Absatz von Konsumgütern günstiges Verhältnis zwischen Arbeitseinkommen und Kapitaleinkommen aufweist.

Nun wissen die arbeitskämpferischen Arbeitnehmer allerdings, dasz im Laufe der technischen Entwicklung der Anteil der Arbeitseinkommen am sozialen Produkt immer kleiner und der Anteil des Zuwachses zu den Produktionsmitteln immer gröszer werden musz. Nur darf das Tempo dieses jährlichen Zuwachses nicht zu schnell sein.

Die Rationalisierung, die vor allem Lohnkosten für menschliche Arbeit sparen hilft, erhöht selbstverständlich ständig die Gefahr, dasz die Einkommensverteilung fehl geht und schlieszlich Arbeitslosigkeit resultiert.

Es versteht sich, dasz eine blosz kleine Lohnerhöhung im Gefolge der Rationalisierung, die die gesamte nach der Rationalisierung

ausgezahlte Lohnsumme noch immer weit hinter der vor der Rationalisierung ausgezahlten zurückbleiben läszt, den Arbeitnehmern noch nicht ihre Sorge um die Existenz nehmen kann. Man bemerkt daher auch, dasz die arbeitskämpferischen Arbeitnehmer nur bei groszen Lohnerhöhungen in der Gesamtindustrie gewillt wären, ihre Mitwirkung bei der Rationalisierung zu gewähren.

In diesen Zusammenhang gehört auch die Frage, ob die arbeitskämpferischen Arbeiter und Angestellten durch Gewinn- und Kapitalbeteiligungssysteme an dem Gedeihen ihrer Unternehmungen interessiert werden können. Die amerikanischen und auch englischen Arbeitnehmer verhalten sich gegenüber solchen Einrichtungen ganz anders als die Arbeitnehmer aus Ländern, die auf dem europäischen Festlande liegen. Das hängt mit den anders gearteten Erfahrungen der europäischen Arbeitnehmerschaft in der Vergangenheit zusammen.

Der gegnerischen Einstellung zum Privatkapital gemäsz würden arbeitskämpferische Gewerkschaften am liebsten jeden privaten Aktienerwerb ihrer Mitglieder verhindern, wenn sie könnten. Unter den gegebenen Umständen beschränken sie sich aber darauf, die allgemeine, im Rahmen des Lohnsystemes liegende Kapitalbeteiligung zu verwerfen.

Etwas anders wird die Gewinnbeteiligung beurteilt. In einigen Betrieben Europas existieren Gewinnbeteiligungssysteme, die wohl bisher mehr den Zweck hatten, die Arbeitnehmer auf die Abhängigkeit des Ertrages eines Unternehmens von Marktlage und Wirtschaftskonjunktur aufmerksam zu machen, als den zu einer Befriedung der Arbeit zu führen, denn die ausgeschütteten Beträge waren gewöhnlich unverhältnismäszig klein. Die beste Aufnahme bei den arbeitskämpferischen Arbeitnehmern fand wohl eine Regelung, die vor einige Jahren im englischen Kohlenbergbau getroffen und nachher aber wieder abgeschafft wurde. Die Löhne der Bergarbeiter wurden für eine gewisse Zeit fixiert und dazu vereinbart, dasz Rationalisierungsgewinne nach einem bestimmten Schlüssel aufgeteilt werden sollten.

Sicher läszt sich behaupten, dasz die Mitwirkung der Arbeiterschaft, soweit sie von der Lohnfrage abhängt, dann eher gewährt werden wird, wenn die Unternehmer der Oeffentlichkeit die Anlegung von Statistiken ermöglichen, aus denen z.B. ersichtlich sind: Ausbringung pro Kopf des Arbeiters, Umsatz, Lagergrösse, Häufigkeit des Lagerumschlages, Betriebskraftaufwandes in PS oder KW-Stunden, Aufwand für angelieferte Rohmaterialien,

Beschäftigtenstand, Lohn- und Gehaltsaufwand, tatsächlich geleistete Arbeitsstunden. Diese und ähnliche Angaben sind notwendig, um die Entwicklung der Kaufkraft für Konsumgüter und für Produktionsgüter zu beobachten, das Verhältnis zwischen Produktions- und Bedarfsgütererzeugung, zwischen industrieller und landwirtschaftlicher Produktion zu kontrollieren.

Als dritte Bestrebung arbeitskämpferischer Arbeitnehmer bezeichneten wir den Ausbau der Wirtschafts- und Betriebsdemokratie. Die Wirtschafts- und Betriebsdemokratie bedeutet im Grunde nichts anderes als eine Einengung der unumschränkten Verfügungsgewalt der Besitzer von Produktionsmitteln über diese. Es ist daher selbstverständlich, dasz die Arbeitnehmer eine Erweiterung ihrer Rechte in diesem Sinne auch mit einer gröszeren Verantwortung für die Produktionsmittel bezahlen müssen.

Es gibt aber zweierlei Arten von Betriebsdemokratie. Die eine Art gewährt ein patriarchalischer Unternehmer. Urwick nannte das auf dem Cambridger Kongress "benevolent paternalism". Die andere Art, die allein von arbeitskämpferischen Arbeitnehmern akzeptiert wird, ist dadurch charakterisiert, dasz die Einschränkung der Verfügungsgewalt des Unternehmers über Produktionsmittel und die Einräumung, bezw. Ausdehnung der Verfügungsgewalt der Arbeitnehmer über Produktionsmittel als soziale und wirtschaftliche Umwälzung angesehen wird, die mit der modernen Auffassung über die soziale Funktion der Arbeit im Einklange steht.

Auf dem Cambridger Kongress hörten wir, dasz die Ohio Brass Co. in Mansfield, Ohio, während der Arbeitszeit Vorträge über Personalwesen, Produktion, Verkauf, Reklame, Kalkulation und auch Betriebsbesichtigungen in Gruppen zu je 8 Mann einschaltete, um den Arbeitern Einblick in den Betrieb zu gewähren. Eine solche Einführung in die Arbeitsnotwendigkeiten und in die Betriebspolitik ist allein eines denkenden, zivilisierten Arbeiters von heute würdig. In Deutschland haben selbst den Unternehmern nahe stehende Kreise verlangt, dasz man den Betriebsräten, die Mitglieder des Aufsichtrates von Aktiengesellschaften sind, die Befugnis erteile, tatsächliche Geschäftsvorfälle nachzuprüfen. Diese Art der Demokratisierung der Information über den Betrieb ist wohl als Vorstufe für die Demokratisierung der Verfügungsgewalt zu betrachten. Schon diese Vorstufe aber bewegt viele Arbeitnehmer, ihre Mitarbeit zu gewähren.

DIE MITARBEIT DER ARBEITERSCHAFT

In meinem Referate auf dem Cambridger Kongress habe ich verschiedene Forderungen gestellt, um in dem Arbeitnehmer das Gefühl der Ungleichheit zwischen sich und dem Unternehmer zu verringern, d.h. die Betriebsatmosphäre zu demokratisieren. Dazu gehört z.B. dasz der Unternehmer auch so zeitlich in den Betrieb kommen soll, wie seine Angestellten; dasz auch die Existenz der Arbeiter weitgehend gesichert werden soll; dasz die intellektuelle Minderwertigkeit der Handarbeit nach Möglichkeit durch Technisierung beseitigt werden soll; dasz dem Arbeiter genügend Freizeit gewährt werden und die Arbeit in reinlicher und sauberer Umgebung erfolgen solle.
Andere Vorschläge zur Betriebsdemokratisierung wurden gleichfalls schon auf früheren Tagungen der I. R. I. erstattet. So hat Colman das Recht der Vorsprache für jeden beim Betriebsleiter, Olzendam eine jährlich einmal stattfindende Besprechung mit dem Präsidenten von groszen Konzernen vorgeschlagen. Colman trat auch dafür ein, dasz Versetzungen und Entlassungen nur mit Zustimmung des Betriebsleiters und der Generaldirektion erfolgen sollen. In meinem Referate auf dem Cambridger Kongress bin ich ferner eingetreten für eine Einflusznahme der Betriebsräte auf die Zusammensetzung der Belegschaft unter Berücksichtigung der richtigen Mischung der Persönlichkeitstypen; für eine Verleihung von Disziplinargewalt nur an Personen mit technischen und arbeitsorganisatorischen Befugnissen etc.

Die Hebung der Arbeitsfreude wurde als viertes Ziel der Bestrebungen der Arbeitnehmer angeführt. Je mehr es durch verschiedene Masznahmen gelingt, die Arbeitsfreude zu heben, desto eher wird in der Arbeitnehmerschaft die Geneigtheit bestehen, im Produktionsprozesz nicht nur passiv mitzuarbeiten.
Es gibt eine Reihe von Masznahmen, durch die die Arbeitsfreude erhöht werden könnte, die gar keine Ausgaben verursachen. Hierher gehört vor allem eine bessere seelische Behandlung der Arbeitnehmer. Höflichkeit, soziale Gleichstellung im Verkehr mit ihnen, keine Herabsetzung oder Verhöhnung der Sehnsucht nach andern Gesellschafts- und Wirtschaftsformen, keine Verkleinerung, Ignorierung oder Verhöhnung des Solidaritätsgefühles, kein Uebelnehmen der aus der Arbeiterpsychologie sich ergebenden Proteststimmung und Impulsivität, keine Bürokratisierung des Produktionsprozesses etc.
Viele der andern Masznahmen zur Hebung der Arbeitsfreude werden allerdings Kosten verursachen, die sich aber bezahlt

machen. Es seien nur erwähnt: gesunde Arbeitsräume, Beseitigung monotoner Arbeit durch Vollautomatisierung, Verhinderung unnützer Entfachlichung, Entsorgung in Bezug auf Arbeitslosigkeit, Krankheit, Alter, Unfall.
Olzendams ganz ausgezeichneter Vorschlag, ein mehrjähriges Arbeitsprogramm der Belegschaft vorzulegen, wird noch vom Cambridger Kongress in guter Erinnerung sein. Ist tatsächlich Gewähr geboten, dasz ein solches Programm eingehalten wird, so musz die in dem Arbeiter lebende Hoffnung auf Verbesserung seiner Arbeitsbedingungen ein gewaltiges Ansteigen seiner Arbeitsfreude zur Folge haben.

Die Abhängigkeit der Mitwirkung der Arbeitnehmer vom fünften und sechsten Ziel ihrer Bestrebungen (Gesundheitsschutz, Freizeitverlängerung) kann nur ganz kurz gestreift werden. Die Bestgestaltung der Arbeitsplätze, die Einschaltung der Arbeitspausen, der Arbeitswechsel bei monotoner Arbeit und viele andere Massnahmen lassen in dem Arbeitnehmer das Bewusztsein entstehen, dasz er anders gewertet wird als die toten Produktionsmittel und er wird selbst bei arbeitskämpferischer Einstellung seine Mitarbeit in der einen oder andern Form schon aus diesem Grunde nicht versagen.
Wie sehr die Arbeitnehmer ein Zugeständis in der Frage der Freizeit beeinfluszt, hat Henry in seinem Memorandum für die heutige Diskussion mitgeteilt. Die Gewährung eines einwöchigen Urlaubs pro Jahr hat die kanadische Eisenbahnergewerkschaft mit beeinfluszt, ihre Mitarbeit zu gewähren.

Nun kommen wir zu der letzten Zielsetzung arbeitskämpferischer Arbeitnehmer. Diese Ausführungen werden gerade für amerikanische Mitglieder besonders wichtig sein. Verschiedenen Umständen ist es zuzuschreiben, dasz der Geist der Wirtschaft und der in ihr Tätigen drüben ganz anders ist. Während bei uns in Europa weit mehr als die Hälfte der Arbeiterschaft die Wirtschaftsorganisation von Grund auf umgestalten will, finden sich in Amerika dafür nur verhältnismäszig wenige Stimmen,
Alljährlich kann man eine Einschränkung der absoluten Alleinherrschaft der Unternehmer über die Produktionsmittel und damit über die in Abhängigkeit von den Produktionsmitteln stehenden Arbeitnehmer feststellen. Wenn trotzdem nicht die Geneigtheit zur Mitwirkung in der Rationalisierung über das absolute Minimum wächst, so ist das vielfach darauf zurückzuführen, dasz die

den Arbeitnehmern günstigen Veränderungen in der Verfügungsgewalt wieder durch die aus den Betriebszusammenlegungen Kapitalskonzentration resultierende Machterweiterung des Unternehmertums wett gemacht wird. Man stelle sich doch nur einmal die den Arbeitnehmern gegenüber stehende grosze Kapitalsmacht des Standard Oil Trusts, der I. G. Farbenindustrie etc. vor. Musz sich da nicht schon rein psychologisch der einzelne Arbeitnehmer wie eine unter einem Mikroskop betrachtete winzige Zelle vorkommen, die gar keine Rolle spielt. Diese Uebermacht, soferne sie nicht durch Staat oder Gemeinde eingeschränkt wird, musz in ihm das Gefühl der absoluten Unbedeutendheit und Existenzfurcht erzeugen. Die Verweigerung, dieses Monsterunternehmen zur fördern, erscheint aus der Enge seiner Psychologie ohne weiteres verständlich. Wie soll ein Arbeiter, der nie in seinem Leben die Möglichkeit hatte, die weite Welt zu sehen, der vielleicht nur seine engste Heimat und selbst die nur schlecht kennt, einen internationalen Konzern wie ein Weltmann beurteilen können.

Dazu kommt jetzt noch, dasz die Lage des Arbeitnehmers bei einem eventuellen Streik verschlechtert wird, der Einflusz der groszen Konzerne und Kartelle auf die staatlichen Organe gröszer wird und die Preise vollkommen monopolistisch (d.h. Arbeitslosigkeit erzeugend!) gestaltet werden.

Sobald aber die Zeit gekommen sein wird, auch solche monopolistischen Unternehmungen und Organisationen im Interesse der Gesamtwirtschaft zu kontrollieren, werden dann jene vielfältigen staatlichen Masznahmen, die den Zweck verfolgen, das öffentliche Interesse gegenüber dem privaten zusehends geltend zu machen, keine Gegenströmung mehr haben. Die Geneigtheit der Arbeiterschaft zur Mitwirkung am Produktionsprozess über das minimale Ausmasz hinaus musz und wird dann immer gröszer werden.

Mr. Mauldon hat in einem Memorandum für den heutigen Diskussionstag ein sehr interessantes Experiment beschrieben, durch das auf Grund privater Vereinbarung zwischen einer Unternehmung und ihrer Arbeiterschaft das Recht der Arbeiter auf die Produktionsmittel zum Vorteile der Unternehmung ausgedehnt wurde. Nach den Mitteilungen Mr. Mauldons hat sich dieses System bisher ausgezeichnet bewährt.

Die Behauptung, dasz sich bei diesem allmählichen Wandel in den Wirtschaftsformen auch die Mitwirkung der Arbeiter an der Rationalisierung privatkapitalistischer Betriebe ändern wird, ist keineswegs blosze Mutmaszung. Sieht man doch, dasz überall,

wo die Arbeitnehmer entscheidenden Einflusz auf die Wirtschaft haben, sie die Rationalisierung nach Kräften fördern. Ein typisches Beispiel dafür ist das Verhalten der jetzigen Reichsregierung in Deutschland in der hauptsächlich Arbeitervertreter auf die Reichsbahnen Einflusz haben und die die einzelnen Fabriken, die der Reichsbahn Waggons liefern, geradezu zur Rationalisierung zwingen. Es hat nämlich jede mit einem Auftrag bedachte Firma genaue Unkosten und andere Selbstkosten anzugeben. Die Reichsbahn vergleicht nun die Gestehungskosten der verschiedenen Firmen untereinander. Sind sie aus irgend einem Betrieb im Verhältnis zu den andern zu hoch, so droht die Reichsbahn im Wiederholungsfalle, die Fabrik nicht mehr mit einem Auftrag zu beteilen, falls nicht Rationalisierungsmasznahmen ergriffen würden.
Ueber die von Arbeitervertretern rationalisierten Betriebe der Gemeinden lieszen sich unzählige Beispiele anführen. Wo Arbeitnehmervertreter als Händler auftreten, wie z.B. in den Groszeinkaufsgenossenschaften, ist dieselbe Beobachtung zu machen. In vielen Ländern sind die Arbeitnehmer geradezu die Führer auf dem Gebiete der Rationalisierung des Konsums und des Haushaltes. Erwägt man noch, dasz die Gewerkschaften in überparteilichen und gesamtwirtschaftlichen Stellen, wie z.B. in dem deutschen und österreichischen Reichskuratorium für Wirtschaftlichkeit mit den Unternehmern an der Rationalisierung der Wirtschaft arbeiten, so musz ihnen unbedingt ein allgemeiner Rationalisierungswille zugestanden werden, der sofort auch in der Privatwirtschaft, wenn auch nur in mehr oder weniger beschränktem Umfange in Aktion treten kann, wenn die Bedingungen dafür vorhanden sind.

Wir haben nun punktweise die Abhängigkeit der Mitwirkung der Arbeiter durchbesprochen und haben gesehen, dasz auch in der kapitalistischen Wirtschaft selbst von arbeitskämpferischen Arbeitnehmern und Gewerkschaften eine Mitwirkung mehr oder weniger leicht zu erzielen ist. Dies soll aber keineswegs heiszen, dasz die arbeitskämpferischen Gewerkschaften, auch wenn sie eine Mitwirkung gewähren, auf den Arbeitskampf je Verzicht leisten würden. Der Unternehmer, der mit arbeitskämpferischen Arbeitnehmern zu tun hat, wird nach wie vor auf Eruptionen gefaszt sein müssen, trotzdem er sich der Mitarbeit erfreuen kann. Das bringt das kapitalistische Wirtschaftssystem mit sich,

das immer voll der Ueberraschungen für Unternehmer, Arbeitnehmer, Händler und Konsumenten ist.

Diese Sachlage musz aber keineswegs pessimistisch stimmen. Kein wirklich fortschrittlich Gesinnter wird wünschen, dasz Unternehmer oder Arbeitnehmer je gänzlich zufrieden sein sollen. Ein gewisses Masz von Unzufriedenheit ist für den Fortschritt immer notwendig. Denn nur Unzufriedenheit treibt die Menschen an, die Wirtschaft zu verbessern. Aber obwohl man an ein gewisses Masz von dauernd bestehender Unzufriedenheit glauben mag, so musz doch jeder die Ursachen und Gründe für den mangelnden Willen, die schon vorhandene Verständigungsmaschinerie zu benutzen, bedauern. Die arbeitskämpferischen Arbeitnehmer sind in dieser Beziehung einer Meinung mit den Unternehmern. Unsere Ausführungen haben gezeigt, wie man den gegenwärtig noch mangelnden Willen erreichen kann. Wir haben feststellen können, dasz die Aufgabe verhältnismäszig leicht zu lösen ist. Der alte Weisheitsspruch "Wo ein Wille ist, da ist auch ein Weg" wird sich auch auf diesem Gebiete bewähren. Möge es der I. R. I. vergönnt sein, der Wirtschaft den ernstlichen Willen einzugeben, diesen Weg zu suchen. Wir haben alle Ursache, der zukünftigen Entwicklung mit Optimismus entgegenzusehen.

In diesem Beitrag ist infolge eines Versehens sz statt ss gesetzt worden. Ein Umdruck konnte aus technischen Gründen nicht mehr vorgenommen werden.

PERSONNEL POLICY AND PROCEDURE

BY Dr. C. H. NORTHCOTT, LABOUR MANAGER MESSRS. ROWNTREE & CO. LTD., YORK, ENGLAND.

The subject given to me to deal with to-day is a very broad one. The title of "Personnel Policy and Procedure" is held to include a great variety of subjects. I propose to take three of them and to devote attention to these three primarily. These are:

the forms of organisation of management and their influence upon personnel procedure;

the relation of labour to the administration of personnel policy;

selection, training and promotion of employees.

The third question - selection, training and promotion of employees - will be taken by Miss Thyra Smith, Assistant Psychologist to Rowntree & Co. Ltd., who has had some six and a half years experience in this matter.

You will, I am sure, admit that the first question I have chosen to speak upon, namely, the forms of organisation of management, is an important one in connection with personnel procedure. Administration and policy govern procedure, and if a scientifically controlled industry is to take any account of labour, labour questions must be given their proper place. The industry and the individual establishment must be so organised that personnel matters and matters of human relations shall be given proper weight in business policy.

My subject compels me to consider quite briefly certain forms of organisation. You will recall that on the second day, when Herr von Haan endeavoured to explain a number of charts, we got into quite a difficulty in respect of one or two matters; there was not a single one of us courageous enough to explain "line and staff" and other methods of organisation. I cannot avoid that responsibility this morning and I must, therefore, take my courage in both hands and throw myself on your mercy.

The old type of organisation is the departmental type as we call it in English, the control of the shop by one man, who has not only control of the area denoted by the shop, but control of everything that happens there, including the engagement of labour, the rates of pay, the dismissal of employees and many other personnel matters. In any large establishment such a type of organisation of responsibility tends to produce

as many policies concerning labour as there are managers. This is not desirable if there is to be any scientific organisation of the whole establishment, for there should be uniformity of policy, practice and procedure. The departmental system, therefore, fails on these grounds. There is another rather incidental but illustrative criticism that I should like to put forward. It is a common experience under such conditions to find that one manager or foreman is dismissing men from his shop as though it were the whole establishment, and such a man may go round to another door and be engaged again in another of the shops as if in a separate establishment. Such waste is in itself a criticism of this type of organisation.

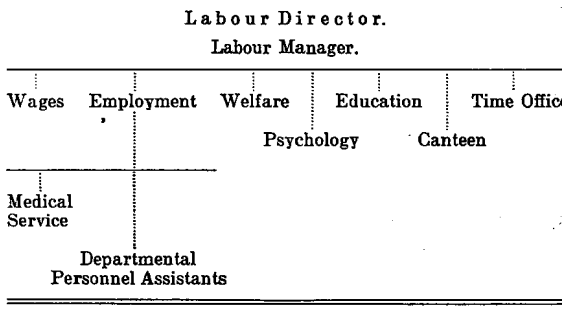
The second type of organisation is known to us in English as the "line and staff", and here I plunge into the troubled waters. In the line organisation you have the military type with the chief at the top. That is the line as I understand it. The staff are, of course, experts who give advice. There are probably present here many members of the staff type of organisation, whose knowledge and experience is beyond criticism. But in the type of organisation we are discussing such experts are without authority. They may give advice but have no power to see that that which is wise, that which is prudent, that which is healthful to the organisation, taking a long view concerning all these matters, is carried through.

This I take to be the chief criticism of the line and staff type of organisation in respect of all those questions which affect human relations. If human relations are an important aspect of industry, then we must give those who control them a position in the organisation that will enable them to carry through a policy which is just and wise and, taking a long view, economical and profitable.

I turn, therefore, to the third type of organisation, that known as the functional type. The idea is, I hope, clear. It is best illustrated, as Dr. Vernon put it to me, in this way. As in the body, various organs have a function to perform, so in the organism which we call the establishment, there will be separate organs carrying out distinct functions, interlocking and working together as harmoniously as the organs of our own body do.

In this type of organisation responsibility is not by area; it is not by shops, if I may use that term to illustrate what I mean by area. It is by a group of responsibilities, of activities rather.

In this discussion meeting of the I. R. I., it will, I hope, be admitted that industrial questions are interlocked and bound together so that they can be described as inter-related, and if we take all those inter-related responsibilities and group them together and make them the responsibility of one person, we get the functional type of labour administration. It is of that type that I want to speak for a few minutes, and to that end I turn to this chart on the board.



The Labour Director is the member of the Board of Directors responsible for dealing with all questions of labour relations.

The Labour Manager has executive responsibility for this series of related functions. He must do the work. The Director is concerned with administration, if that distinction is clear. It is one of the distinctions that Mr. Oliver Sheldon, in his very useful book "The Philosophy of Management" has very carefully worked out. Administration entails responsibility for two very important things, namely, policy and expenditure, and in both of these this Director is the representative of the Board.

The Labour Manager is more than an Employment Manager. The area of responsibility devoted to this chart is much wider than that which is understood by employment. You will see that wages form a part of the responsibility of the Labour Manager. But most of you will expect to find wages dealt with by those responsible for production. In our firm, there is a

division and delimitation of responsibility in this matter. My colleague, the Production Manager, is responsible for time studies and for all investigations to determine the rightful output. My responsibility is to see that wages shall be just and fair and in accordance with agreements arrived at between the firm and the representatives of the workers. None of the other terms used on the chart need much description or definition. In total, they indicate that a number of activities definitely associated with industrial relations have been grouped together functionally and made the responsibility of one individual. Such a method of organisation is both proof of the weight given to industrial relations and an instrument for securing proper recognition of the human factor in any new or modified situation.

If I may direct your attention to the dotted line on the chart, I will be able through an historical statement to show how the functional type of organisation has been used to connect labour definitely with management. Ten or twelve years ago, Personnel Assistants were introduced into our factory. It was thought that it would be difficult for young women of this type to work comfortably with the managers who were, therefore, denied any direct responsibility for the activities of these young ladies. In consequence, there were occasions when a conflict arose between the executive Manager of a department and these experts in personnel relations. To illustrate, no girl could be dismissed unless the Manager and the Personnel Assistant had both agreed. The procedure was for the Manager to propose to dismiss and send his recommendation to the Women's Employment Department. This recommendation was then referred back to the Personnel Assistant working in the geographical area controlled by the Departmental Manager. It sometimes happened that the Personnel Assistant would disagree with the Manager whose desire to dismiss a girl would be frustated. Such a situation was not conducive to good discipline or to good organisation.

Since the installation of functional management, we have altered this situation fundamentally. The Personnel Assistant charged with responsibility for the welfare of the girls in the department, understanding welfare in the broadest sense, is now a functional assistant of the Manager, responsible to him in all matters of personal discipline and all questions of her daily work. Any advice which she has to give, she gives directly to him. At

the same time, however, it is essential that her advice and action shall be in accordance with the policy of the firm. It is arranged, therefore, that for guidance in questions of general policy she turns to the Women's Employment Department, through whom she is linked with the Labour function.

I pass now to discuss the relation of labour to the administration of personnel policy. Here administration becomes a matter of leadership. To my mind, management is primarily leadership. The task of the Manager is to lead, to plan, to contrive and to arrange. He who plans, arranges and contrives, must be the leader of his group. A Manager has a group to work with and the quality of his leadership is important. Without true leadership the group will move away from the Manager and you will get the disastrous position illustrated the world over by industrial conflict. I have in mind no idea of military autocracy or military leadership. Industry wants the same type of leader as industrial democracy needs. The democratic leader is rather of the persuasive type, well informed concerning men and women, understanding group movements and knowing how to manage groups and influence them. Further, he must have enough courage to enable him to go ahead and not to wait on others. Leading in this way he can form a bridge between labour on the one hand and what is known as capital on the other. He can bring the workers, these partners of ours in the co-operative undertaking we call business, to make a fuller contribution to the business. The goal of this type of leadership is the fullest measure of participation in the business.

There are limits to the degree of participation and in our own establishment we have given some thought to these limits. In connection with the election of foremen, we give a voice to the Trade Union representatives or Shop Stewards. A foreman is nominated and chosen by the management, but before appointment, his name is submitted to the Shop Steward for criticism. The Shop Steward may know something about him and his habits that is not known to the management. The final responsibility for appointment rests with the management. Without some one accepting final responsibility there can be no clearness of decision.

Further, we consult our Shop Stewards when about to dismiss men on account of shortage of work. Please note that we do

not seek the approval of the Shop Stewards when about to dismiss an inefficient man or woman. Any such action seems to us to be bad management; the responsibility for the efficiency of the business must rest with the management. In this gathering we have already heard a management representative quote the reply of a Trade Union to him on this point. Generally British Trade Unionists acknowledge that it is the responsibility of the management to manage. Our procedure will bring this point out quite clearly. When a list of surplus men has been prepared, who are to be dismissed solely because there is no further work for them, we submit these names to the Shop Steward. He may know something of domestic circumstances or about the man's work that has not been brought forward. He may know something of the domestic circumstances of another man whose efficiency is not, in the opinion of the management, very much greater. He may, for instance, ask that a single man shall be dismissed instead of a married man with several children, provided the management find no great difference in the work of the two men. In cases like this it is not very material to the management whether one or another man goes, and the recommendations of the Shop Steward are very sympathetically considered and eventually the written signature of the Shop Steward to the list of men to be dismissed is secured. In this case you have consultation and the acknowledgement on the part of the Shop Steward that all his views have been considered. Fundamentally, however, the management accepts the responsibility for reducing the staff; on this point the Shop Steward, though he may agree to the reduction, is not asked to accept any responsibility.

It will be admitted that ability to participate in direction of a business will depend upon knowledge and information. Where management is consciously aiming at bringing the workers into a position to contribute to the success of a business, definite steps must be taken to give knowledge and information. Our own practice is that the Chairman of the Company regularly speaks to the Central Works' Council on the business, the extent to which trade is growing or declining, the difficulties met with and the prospects and plans of the business. Once a year after the annual meeting of shareholders, he repeats to the Central Works' Council and to an open meeting to which any member of the staff may come, the address he has given

to the shareholders. At times, when any particular matter is pressing, we call the whole of the adult workers together to hear him and with the aid of a microphone practically all of them can be addressed at one time.

In our case much information concerning the business is obtained through a scheme for the distribution of surplus profits, which was worked out in the fullest co-operation with Trade Unions. It is a unique Profit Sharing Scheme in that there has not yet been any distribution under the scheme. It was started in those depressed years when surplus profits, i.e. the profits available for distribution after a certain return to capital had been paid, were not earned, and the arrears which accumulated in those years have not yet been wiped off. Each half year the Profit Sharing Committee appointed by the Central Works' Council, is called together by the Chairman of the Company and the Company Accountant, and is given the facts. I should add that this committee has the right to appoint an Accountant on their own to examine the books if they are not satisfied with the Company Accountant's explanation. Having considered the situation, this Committee goes to the Central Works' Council and explains the position. The fact that for each half year of something like five years there has been so careful a survey of the business and its prospects, has gone a great way to enable the workers to know what the business is and what its difficulties are, and they are sharing in a very real sense in the business through the degree to which they are understanding the changes that have been forced upon us.

I will finish with a reference to what I suggested was the real responsibility of leadership, namely, that it shall take the risk of doing things that have not been done before. Management should not wait for the workers to make a proposal. Even in such a matter as wages, I hold that it is quite unfair to the workers that a grievance known to the management shall remain uncorrected until somebody complains. The greatest problem that faces rationalised industry is the problem of unemployment. I hold that it is not sufficient for the owners or the managers of a business to push men into the unemployed market for whom there is no further work. It is their responsibility to give the utmost thought to

alleviating the difficulty and the burden of unemployment.

I am going to illustrate my argument by the action taken by Rowntree & Co. Ltd., but it is only fair to other British firms, some of whom are represented here, to say that very similar schemes are being carried out in quite a number of other places. It has for several years been our practice to put aside a yearly sum equal to 1 % of the wage bill or £10,000, whichever is the greater, to alleviate the hardship of dismissal or short time. From this fund arrangements are made for a benefit payment to supplement State benefit and a small benefit received from the Trade Union. The scheme applies to every employee over 18 years of age who has had six months of continuous service with the firm. In the case of persons dismissed, the total weekly benefit from the State, the Trade Union and Rowntree & Co. Ltd. is to be 50 % of the weekly earnings of a single man or woman, plus 10 % for a dependent wife and 5 % for each child under 16 years of age up to a total of 75 % of average weekly earnings. One week's benefit is paid for each two months of continuous service up to 2½ years and an additional week is benefit for each three months of subsequent service. Short time benefit is at the rate of 80 % of the benefits just quoted.

Having been compelled to reduce staff even further, we have been driven to follow the logic of this arrangement into another step. If it is right to take each year from the available profits a sum of £10,000, it is both logical and economical to capitalise this sum and invest it in finding work for dismissed men. There is no other cure for unemployment but work. When, therefore, at the close of last year we found ourselves with a rather larger number than usual of surplus men, we took steps to encourage other employers to take the trouble to retrain these men for another occupation. We offered to make a contribution of £2 a week for a year per individual, provided that a minimum rate of 55/- per week was paid with a reasonable prospect of permanency, and that no man was dismissed in order to find a place for one of our surplus men. This offer did not lead to the employment of a very large number of men but it showed the way to another line of action.

Soon after the beginning of the present year it became evident that it would be necessary to dispense with the services of further

men. It was undesirable to withdraw these men from York in any large numbers. Further, it was less economical to make a payment out of revenue than to make a capital investment. Following the principle that the only real remedy for unemployment is to find other work, the Directors decided to invest capital in fresh industries in York. They realised that the line of development where one industry was needing fewer workers, was to inaugurate other industries which were likely to increase in strength and in their demands for labour. Obviously, these must be industries which employed adult male labour, where the bulk of the work can be done by men without special training and where really good wages can ultimately be paid.

Much research was put into the matter of discovering industries that met these conditions. Eventually three industeries concerned with new processes or patents were found, and arrangements made by the Directors of Rowntree & Co. Ltd. to supply the necessary capital and the administration. The services of the patentees having been secured all technical information will be available. By reason of the fact that the products are among those for which there is a growing demand, no difficulty is anticipated in marketing the goods that will be produced. There is abundant evidence that for some time to come the companies will not be able to turn out all that is asked for.

Altogether three small factories have been started in York. Rowntree & Co. Ltd. owned a factory which had been bought during the war as a warehouse and was standing empty. This has been so adapted that the three small factories named above can be conducted in it. Up to date only one is actually functioning and is finding employment for 13 men. It is expected that within a month the two others will also be functioning and that altogether 60 men will be employed by the three concerns by the end of the year. This number will increase considerably in time and with increased sales every effort will be made to pay higher and higher wages.

In conclusion, I suggest that if we are to give industrial relations their proper place in a scientifically organised industry, we must construct our organisation so as to give proper attention to every question of industrial relations. This involves accepting responsibilities which go beyond what many firms accept to-day. This will cost money and effort and will involve all the wisdom

and all the conscience that we possess. By working out constructive programmes in respect of such matters as wages and employment, however, we shall be able to demonstrate to our co-operative partners in industry and to the world, that we regard labour questions as fundamentally integrated into business affairs.

SELECTION, TRAINING AND PROMOTION OF EMPLOYEES

BY THYRA SMITH, ASSISTANT PSYCHOLOGIST MESSRS. ROWNTREE & CO. LTD., YORK, ENGLAND.

One of the consequences of applying science to industry is that greater demands are made on the worker. He or she makes greater demands on himself or herself, and the organization expects more. It therefore becomes, if possible, increasingly important that the worker shall be fitted for the job he has to undertake, and that we shall have some means of being sure that the person put to a job has the qualifications necessary for doing that job.

Naturally it is just as important that the individual who is chosen to do this work of selection shall take his own medicine. He must have the qualifications and the training to do his work adequately. Those qualifications are the sort of disposition that permits of quickly becoming what we call technically "en rapport" with his subject, so that they will get together quickly, and the subject who is a candidate for employment will be able to give of his best during the test That same person shall have training in his subject, training in experimental psychology, training in clinical psychology, and by training I mean working sufficiently long in a group where experts have already worked to measure his findings against theirs and know that they are sound. Not until that point is reached is any such person fit to take on the responsibilities of selection.

Then such a person must go into a plant, and, I believe, stay in it. I do not believe a sound job can be done in a period of months, because selection, training, promotion all hang together. The same person must be responsible, and therefore they have to stay by their work and probably face the music.

They must start by going into the rooms, observing the jobs, working on the jobs sufficiently long to know what abilities are required of the worker and what it means to stay at that job as a worker has to stay at it, to know the fatigues, the strain, the satisfactions and the hopes involved.

Then they must set to work to devise, or if possible, borrow suitable tests, and establish standards for the tests themselves, that is - test out their own tests. For this they may have to go back into the schools. They will undoubtedly have to work with a great many of their fellows, whom they will have got to know on the job in the room, so that a mutual trust is established.

Then they will have to apply mathematics in the formation of statistics to these tests to find out that those tests really apply generally, that they test particular abilities and the degree to which those abilities are possessed by the people tested.

They will find in all probability that two kinds of test are needed, namely performance tests and written tests, because the plant will ask - if it is going to find them of any use - that their testing shall extend from the top down or from the bottom up, whichever way you like to put it. Sauce for the goose has to be sauce for the gander in this game.

We have found that our written tests must include cancellation tests for observation and accuracy in that observation; substitution tests, which give us a check on immediate memory; directions tests which give us an indication of a person's capacity for clearly understanding and carrying out orders; association tests, which according to Dr. Cyril Burt of London, give an indication of initiative. Our experience tends to bear out this theory. We must also have a general knowledge test, that is the kinds of things about which an alert person gathers information in every day life, a test, in a word, of a sort of - I rather hesitate to use the word because I am not a bit prepared to define it - "general intelligence".

On the performance side, the first essential is some device for giving an indication of the individual's ability to solve a simple problem, to fit materials to suit his needs, the needs of the job.

Then we take reaction times, both simple reaction to a light, and discrimination reaction to illuminated forms. The remainder of the story is motor co-ordination and control - how well we can make our hands do what our brain is telling them needs to be done.

For the making of these tests, the written tests can be taken in groups. The size of the group matters little. Performance tests we make in groups of six, for two reasons. The people who are tested are much happier in groups. They look upon the whole thing, if they are school children coming as candidates, rather as a game. If they are older people, they bolster one another up. We find it much easier to get a happy feeling, and it is no good testing if you have not got that. Give it up until you have.

There is just one small section of the test that is done between a trained examiner and one subject. That is the little practical planning test, where if you let one person watch another,

you cannot test the second; they copy from the first.

Having found our tests we set to work to establish standards amongst our own workers. In a given job we took a group, not less than thirty in number, composed as follows: five who were thoroughly superior, agreed by their fellows and their foreman to give extraordinarily high quality, to give more than average quantity output, the top group. A group of twenty, who were average, satisfactory, 100 % efficient in output with quality that the examiner passed. Five not so good, who found it difficult to make the required output, or frequently had work returned by the examiner for poor quality. We rated these people in consultation with the foreman and the shop steward. Having done this, we tested these people on the tests I have just described, looked into the picture that came out and considered the result a standard for that job. That was our basis, and it took nearly three years hard working to get that amount of satisfactory material.

On these tests we engaged juniors. Every boy or girl, or man or woman, seeking work with Rowntree & Co goes through these tests and is allotted to a particular job.

Now comes the training. We have established in our shops little groups of expert workers who have proven their ability to teach their fellows; and I think I shall not need to say that ability to be expert on the job and ability to teach that job are not one and the same thing. Therefore we have looked for people whose performance was beyond criticism, but who could demonstrate and teach their fellows to do the same job. We put our young people in groups with such trainers and follow them week by week, day by day, sometimes hour by hour, to help them become expert in their job, each week checking their progress, giving them a chart of their progress, so that they can see if they have grown a little quicker each time and if not, why not. We talk it over with them. That follow up is again to check our tests. Are they holding good? Do they need altering? Are the standards sound and fair?

Then out of that grows yet another side of the work of selection namely: promotion. In Rowntree & Co. it is usual to promote from inside to any supervisory job. These positions are advertised in the shops, the employees apply, and we again ask a certain level that we have proven effective for promotion. Advice on this is given by the psychological department.

In closing I would like to state two things - firstly, the feeling of the workers towards this, as gathered from their expressions while I am working with them, and secondly, d o e s i t p a y?

The workers frequently now say, "Well, there is just one thing we feel about all this - it is fair. We are judged on what we do."

From the administration point of view Dr. Northcott permits me to say that a most careful investigation into the value of the department was made at the beginning of the present year, and it was found that although we have two fully trained psychologists, an engineer to assist us on the motion study side, and four clerical assistants, involving a considerable cost, in balancing on the estimates of savings, it was found that the department paid its way several times over.

LES SOURCES PROFONDES DE LA PRODUCTIVITÉ PAR H. DUBREUIL, SECRÉTAIRE DE LA CONFÉDÉRATION GÉNÉRALE DU TRAVAIL, PARIS.

Après avoir assisté à vos travaux et essayé d'en comprendre le sens général, après avoir constaté parmi vous deux ordres de préoccupations principales, je voudrais tenter de dégager devant vous la direction générale de vos efforts communs.

Comme M. Urwick le déclarait hier, toutes les recherches en vue de réaliser une organisation scientifique du travail procèdent de l'application à notre vie quotidienne de la célèbre parole antique: "Vivre d'abord". Mais l'effort parallèle de tous ceux qui parmi vous s'attachent d'autre part à réaliser dans le travail une vie nouvelle par des rapports plus harmoniques, nous rappelle aussi cette parole antique qui nous a dit que "l'homme ne vit pas de pain seulement".

Ainsi il se trouve que notre but commun, dont l'unité est démontrée par la conjugaison de nos efforts, se trouve être à la fois utilitaire et éthique: Nous essayons ensemble de découvrir les sources profondes de la productivité et de la joie.

D'abord, puisons dans les faits quelques fortes raisons d'espérer, afin d'y fortifier notre courage.

Après les premières tentatives et les premières réalisations dans le sens d'une organisation plus scientifique du travail, on a tenté de nous effrayer avec ses résultats moraux, avec l'influence qu'on a prétendu y découvrir sur le développement de l'intelligence ouvrière, qu'on a prétendue menacée d'extinction.

Le reproche serait grave si nous ne pouvions y répondre par des faits pris dans la vie industrielle elle-même. Or, les preuves abondent que malgré l'évolution du travail moderne l'intelligence ouvrière est encore pleine de ressources sur lesquelles nous pouvons fonder de grands espoirs pour nos réalisations de demain. Très rapidement, je prendrai seulement deux cas, fort différents et éloignés l'un de l'autre.

J'irai chercher le premier chez Ford, dans cette usine qui peut être considérée sans doute comme la plus mécanisée du monde, et dans laquelle par conséquent on pourrait prétendre à découvrir le plus complet affaissement des capacités ouvrières.

J'y travaillai précisément dans l'intervalle créé par le passage de la fabrication de l'ancienne voiture à la nouvelle, et tous ceux qui ont quelque réelle expérience de la vie des usines savent

quelle peut y être la situation dans un pareil cas. On peut tenter de tout prévoir dans les bureaux par les plus grands efforts d'organisation et d'étude, mais on ne peut y empêcher que, dans la réalisation matérielle des dispositifs nouveaux, des difficultés imprévues se présenteront. Un effort intense de recherche et d'invention s'impose alors, souvent pressé par la hâte de certains délais imposés, et qui jettent une atmosphère de fièvre sur ce travail de recherche. Ingénieurs et ouvriers collaborent alors avec une ardeur commune, chacun poussés par le désir d'être celui qui surmontera l'obstacle que la théorie n'avait pas soupçonné.

C'est au milieu de telles circonstances, et alors qu'une fabrication importante menaçait de ne pouvoir être mise en marche dans de bonnes conditions, qu'un ouvrier découvrit tout à coup la solution que tout le monde cherchait vainement, et l'offrit si simple et si pratique qu'elle fut immédiatement adoptée. La flamme d'intelligence avait lui là où l'on voudrait prétendre que le machinisme est en train de l'éteindre.

Le second exemple que je choisirai est d'un ordre assez différent. Je le prendrai dans une filature de Roumanie où le personnel ne peut se recruter comme en Amérique dans une population ouvrière déjà habituée à la vie particulière créée par l'atmosphère de la production industrielle.

Dans cette entreprise, on recrute le personnel au milieu d'une classe paysanne de moeurs assez primitives, et dans laquelle les lumières de la culture occidentale n'ont encore guère pénétré. Voici donc des paysans tout à coup insérés dans la vie industrielle sans préparation d'aucune sorte, et comme ils n'ont aucun savoir professionnel, on s'y trouve obligé de ne leur confier que des opérations simples et faciles et présentant ce caractère de répétition qui caractérise aujourd'hui tous les procédés de fabrication par grandes quantités.

Or, un jeune paysan y avait été placé à une opération d'empaquetage qui consistait seulement, d'un bout de la journée à l'autre, à lier de deux ficelles les deux extrémités de pièces d'étoffe enroulées par une machine. Il fit ce travail monotone fort longtemps sans doute, et selon le procédé qu'on lui avait indiqué. Mais au lieu que son intelligence à peine éveillée se trouve encore engourdie par ce travail élémentaire et sans doute fastidieux, elle fut au contraire excitée par le besoin de découvrir quelque moyen de faciliter et d'adoucir une telle tâche. Sous la monotonie de ses gestes se poursuivirent de longues et

patientes réflexions qui aboutirent à l'invention de dispositifs très ingénieux, dans lesquels ses bobines de ficelle se trouvaient adaptées au siège même où il était assis de telle façon que sa production fut augmentée de 30 à 40 %, alors que son travail était en même temps grandement facilité.

Ce sont là des exemples que l'on pourrait longuement multiplier sans y retrouver autre chose que la preuve de cette réconfortante survivance de l'intelligence ouvrière au sein même de cette industrie moderne qu'on se hâte trop de charger de méfaits exagérés.

Mais est-ce à dire que néanmoins nous ayions lieu d'être satisfaits, et que l'avenir ne réclame de nous aucun effort pour atteindre un état de choses plus parfait que celui au milieu duquel nous vivons? Notre présence à tous, ici, prouve au contraire notre volonté de réaliser des formes de vie supérieure, d'atteindre d'une part à la productivité abondante qu'exige le service de la démocratie moderne, et à une harmonie des rapports humains que notre organisation sociale n'a pas encore su atteindre.

Pour marcher vers ce but qui est le nôtre à tous, il me semble que nous aussi nous devrions faire notre plein profit d'une parfaite compréhension de la méthode scientifique, et l'appliquer tout d'abord à l'examen de tous les faits historiques relatifs à la vie du travail. Il y aurait lieu par exemple d'examiner avec attention les causes profondes qui ont marqué l'évolution de la productivité ouvrière depuis les temps antiques jusqu'à nos jours. Peut-être pourrions-nous ainsi découvrir plus sûrement la direction dans laquelle il importe que nous continuons à avancer.

Par le peu que nous savons de ces temps antiques en matière de travail, nous pouvons nous souvenir du temps de ces pauvres esclaves que l'on pliait sous des pratiques si inhumaines, pour n'en tirer qu'une production extrêmement inférieure à celle de l'ouvrier d'aujourd'hui. Nous savons bien que l'ouvrier de notre temps produit beaucoup plus que l'ancien esclave, et il doit y avoir à cela des causes diverses qu'il serait important de mettre en lumière. Puis, entre ce lointain ancêtre et l'ouvrier moderne, il y a eu une longue évolution. Le serf du Moyen Age eut une situation certainement plus douce que celle de l'esclave des temps anciens, et sa production fut également meilleure. C'est le long de cette ligne que nous pourrions découvrir d'utiles indications pour le sens à donner à nos efforts d'aujourd'hui. Nous y aper-

cevrions sans doute que la productivité ouvrière a augmenté au fur et à mesure que certaines formes de vie sociale supérieure ont été atteintes.

Pour passer maintenant notre vue sur un autre plan, ne pouvons-nous penser qu'il y aurait quelque intérêt à prêter un peu plus d'attention qu'on ne le fait généralement aux efforts qui ont précédé les nôtres, dans le sens d'une meilleure organisation du travail et des rapports humains? Pourquoi par exemple laissa-t-on tomber dans l'oubli les efforts d'un Robert Owen ou d'un Godin? La présence ici de tant de délégués de langue anglaise me permet justement de souligner le fait qu'on retrouve des efforts anglais au début même de la tâche qui nous réunit encore aujourd'hui. Voilà des hommes qui ont cherché avant nous des solutions que nous cherchons encore. Ils ont échoué sans doute, mais l'histoire de leurs efforts, et surtout l'étude des causes de leurs échecs nous donnerait sans doute de précieux enseignements. Puis, en suivant la même ligne, il nous faudrait étudier le déroulement des expériences si intéressantes qui se poursuivent aujourd'hui, en matière de démocratie industrielle, dans les plus typiques des entreprises anglaises ou américaines. Sans doute, il faudrait se garder de tirer à ce sujet des conclusions exagérées, mais il reste néanmoins certain qu'il y a là des faits qui offrent cet intérêt de présenter pour la première fois l'application de la méthode expérimentale à certaines hypothèses formulées en matière de rapports humains.

Changeons encore une fois notre point de vue. Car pourrait-on s'attacher à un tel problème en oubliant les efforts spontanés des ouvriers eux-mêmes au sein des organisations qu'ils ont constituées pour donner un cadre à leurs reflexes de défense? L'ouvrier s'organise dans son atelier avec les camarades qui l'entourent et en vue d'atteindre certains objectifs immédiats! Son point de vue y est relativement limité. Mais dans le sein de ces organisations des individualités s'élèvent qui comprennent que le point de vue de l'atelier est quelquefois trop étroit, et que pour certaines questions il est nécessaire de regarder au dehors. L'histoire des organisations ouvrières prouve nettement cet élargissement de leur point de vue. Le premier geste de l'ouvrier dans l'atelier n'est souvent qu'un reflexe et un acte négatif. C'est une mesure de défense élémentaire. Mais peu

à peu lorsque le point de vue s'élargit à travers les obstacles de l'expérience, ce rôle négatif et passif se modifie pour atteindre par degrès la conception d'un rôle actif et positif, aujourd'hui nettement formulé dans les propositions de collaboration des ouvriers à la gestion des entreprises.

Là encore l'histoire pourra nous éclairer et nous aider. Lorsque par exemple les ouvriers commencent à oser dire qu'ils pourraient spontanément sélectionner leurs propres chefs, tout au moins dans les échelons subalterne, nous pourrions rappeler des faits brillants du passé populaire. Lorsque par exemple en 1792 l'armée de la Révolution Française se trouva dépourvue de chefs par l'émigration en masse de tous les cadres qui étaient nobles, nous savons qu'on laissa aux soldats en beaucoup de cas le soin de trouver parmi eux les chefs capables de les conduire en bon ordre à la victoire. Or, qui ne sait qu'à ce moment la valeur défensive de cette armée fut portée à ses limites extrêmes, et que dans ses mémoires, un grand chef de l'époque, le général Gouvion Saint Cyr attesta que dans la majorité des cas les choix faits par les soldats avaient été excellents.

J'ose dire qu'on peut légitimement espérer que dans l'avenir les Hoche et les Marceau du travail pourront eux aussi sortir du rang comme de grands conducteurs de la vie industrielle. Des exemples illustres en existent déjà comme des exceptions brillantes. Demain, si nous savons être assez intelligents leur ascension sera la règle.

Mais il faut maintenant nous élever plus haut et atteindre au coeur du problème. Nous pourrions-nous considérer comme nécessaire d'établir une comparaison entre les divers exemples d'attitude devant le travail que nous avons chaque jour sous les yeux? Car en effet la "méthode scientifique" dont on parle tant au sujet du travail ne devrait-elle pas nous conduire à étudier avec la plus grande attention les divers exemples de travail que nous avons précisément sous les yeux.

Nous avons parlé tout à l'heure de l'esclave, et nous avons vu qu'il nous a donné un exemple de la forme la plus inférieure de la productivité. Mais quelle en est par contre la forme la plus haute? Je dois déclarer que c'est l'artiste qui nous l'apporte. Qu'il s'efforce d'exprimer une pensée en marbre ou à travers les nuances de la couleur, ne pouvons-nous le considérer comme un véritable ouvrier d'une espèce supérieure, lui aussi armé de certains outils particuliers, et se consacrant à son oeuvre

au point d'en perdre souvent la notion du temps? Considéré sous cet angle, l'artiste apparaît bien comme l'expression suprême de l'ouvrier.

Mais il n'est pas le seul qui nous offre dans la société actuelle l'exemple d'une activité ardente. Le paysan, qui travaille du lever du jour au coucher du soleil en ne détachant pas sa pensée de la terre qu'il travaille, ne voit pas non plus ses forces paralysées par cette notion du temps qui porte l'ouvrier industriel à jeter de fréquents regards sur la pendule qu'il trouve trop lente. Puis, je puis bien même faire allusion à cet employeur qu'on a coutume d'offrir en exemple à l'ouvrier nonchalant. On dit à l'ouvrier: "Autrefois vous travailliez dix heures et vous n'avez plus voulu travailler que neuf. Après cela vous avez exigé la journée de huit heures, et lorsqu'on vous écoute on s'aperçoit que vous trouvez que c'est encore trop; mais cependant, regardez votre employeur qui lui bien souvent est encore dans son bureau penché sur ses livres à dix heures du soir, alors que depuis longtemps vous ne pensez plus à l'atelier".

Si j'osais maintenant faire allusion à ma propre présence ici, ne pourrais-je vous faire remarquer avec quelle inquiétude je jette mes regards vers la pendule qui marque le temps de cette conférence, tout effrayé de sa rapidité, alors qu'au contraire, comme n'importe lequel de mes camarades, je trouvais l'horloge de l'usine si lente quand j'étais enfermé dans ses murs.

Après avoir réfléchi sur ces divers genres d'activité, peut-être pourrions-nous maintenant découvrir plus facilement le secret de leurs mobiles?

Pourquoi l'artiste, le paysan, l'employeur, ou moi-même en vous parlant ici, n'ont-ils pas la notion du temps, et donnent-ils le maximum de leur capacité pour accomplir un certain effort?

N'est-ce pas tout simplement qu'ils y sont poussés par des mobiles intérieurs et spontanés?

Considérez à côté d'eux la faiblesse des moyens qu'on emploie pour encadrer tous ceux qui doivent travailler sans le bénéfice de ces puissantes forces intérieures. Vous comprendrez alors que la révolution à accomplir dans le travail consiste à remplacer les moyens de pression extérieurs, si perfectionnés qu'ils puissent être, par quelque chose de plus puissant que chaque être humain porte en lui La véritable solution du problème du travail consiste à trouver le moyen de libérer les mobiles internes, qui de façon évi-

dente dirigent et poussent invinciblement tous ceux qui nous offrent l'exemple d'une activité hautement productive.
Tout ce que la nature et la vie nous présentent de fort et de beau se trouve précisément être animé par des forces internes, dont nous devons seulement avouer que nous ne connaissons pas toujours les lois.

Nous sommes ainsi amenés à penser que pour résoudre les problèmes du travail, nous avons à rechercher quelles sont les lois d'une certaine harmonie, que déjà des oeuvres humaines ont atteinte, bien qu'on puisse trouver aussi audacieux de les indiquer ici qu'on a déjà pu trouver audacieux de me voir rapprocher l'ouvrier de l'artiste. L'harmonie de la musique nous offre peut-être le plus haut exemple de ce que le génie humain a pu déjà réaliser en organisant des rapports de sons. L'harmonie de l'architecture nous montre de même ce qu'on a su atteindre déjà en matière d'organisation de rapports de forces. Et au-dessus des oeuvres humaines, le sublime spectacle de l'harmonie astronomique nous montre l'exemple suprême de la perfection de tels rapports. Sans même aller jusque là, il n'y a pas un brin d'herbe qui ne nous fasse songer à des formes de vie naturelle merveilleuses qui réalisent un ordre parfait sans tests physiologiques ni time study.
Un jour viendra où l'on considérera avec curiosité ces efforts d'aujourd'hui dont nous sommes si fiers, poursuivis dans le but de commencer à mettre un peu d'ordre dans l'organisation et les rapports du travail. Alors on comprendra que nos "méthodes scientifiques" d'aujourd'hui n'auront été que l'application de procédés transitoires entre le désordre et la douleur du passé et l'ordre et l'harmonie de l'avenir. Car elles ne constituent en réalité que le perfectionnement ultime des moyens extérieurs destinés à provoquer l'activité. Le premier en date des moyens extérieurs a été le fouet. Aujourd'hui, c'est tout l'ensemble des études minutieuses dont on a entouré la préparation du travail. Mais rien n'est changé dans le principe fondamental, et si nous voulons aller encore en avant, c'est ce principe qu'il nous faudra changer.
Quand nous voudrons nous approcher réellement de ce problème, nous reconnaîtrons alors, étonnés d'avoir été si longtemps à le comprendre, que l'histoire de l'activité humaine nous montre partout de façon évidente que tout ce qui a jamais été fait de grand, de puissant et de beau par les hommes n'a jamais été

réalisé que par la force de mobiles internes, et jamais sous la pression de moyens extérieurs.

Nous avons donc ainsi à découvrir les sources vives de l'activité en même temps que les lois de l'harmonie des efforts humains, et c'est là que nous voyons se rejoindre dans une direction commune les efforts exercés en vue de réaliser l'organisation scientifique du travail, c'est-à-dire une certaine harmonie dans l'ordre matériel des choses, et ceux qui cherchent à trouver la voie de meilleurs rapports entre les hommes, c'est-à-dire une certaine harmonie morale.

Voilà le but qui nous unit tous ici dans un effort commun, et sans doute ne pouvons-nous caresser l'espoir de voir surgir parmi nous le Newton qui découvrira les lois que nous cherchons. Mais je voudrais vous demander de conserver dans votre esprit, afin de le fortifier d'espoir, une pensée de notre Jaurès, qui a dit un jour que l'harmonie des efforts pouvait suppléer à la puissance du génie. Ce sont là des mots qui peuvent nous servir de guide et de support. En unissant nos forces, nous pouvons légitimement espérer d'atteindre un jour cette paix du travail que tant d'âmes généreuses ont vainement recherchée jusqu'ici.

LA RATIONALISATION EN TANT QU'ÉLÉMENT DE L'ÉVOLUTION DE LA VIE ÉCONOMIQUE

PAR H. PAUWELS,
SECRÉTAIRE GÉNÉRAL DE LA CONFÉDÉRATION DES SYNDICATS CHRÉTIENS DE BELGIQUE, BRUXELLES.

Je ne peux, étant donné le peu de temps dont je dispose, m'étendre sur la raison d'être, les méthodes d'action et le but de l'organisation syndicale. Je dois me limiter à l'action du mouvement syndical en matière de rationalisation.

Les syndicats constituent aujourd'hui, dans leur ensemble, une des parties constructives de la vie économique. Par conséquent il y a lieu de considérer dans le développement de celle-ci et particulièrement dans la rationalisation, l'appoint positif que le mouvement syndical peut apporter.

Il est d'ailleurs intéressant de noter que les syndicats se sont tous prononcés en faveur de méthodes plus rationnelles, plus scientifiques de la production. Tous défendent l'opinion qu'il y a lieu de s'employer à économiser les forces dans la production afin de faciliter le progrès économique.

Cependant les syndicats en se prononçant en faveur de méthodes plus rationelles dans la production n'ont cessé d'attirer l'attention sur les désavantages qui peuvent en résulter pour les travailleurs. Ces désavantages peuvent être momentanés mais il y a lieu cependant de craindre qu'ils soient d'assez longue durée et que d'autre part leur volume soit assez considérable.

Aussi en même temps qu'ils se prononçaient en faveur d'une économie organisée, comme ils ont fait aux Conférences Economiques de Gênes en 1922 et de Genève en 1927, les Syndicats n'ont cessé de demander que des mesures sérieuses soient prises pour que les inconvénients de la rationalisation soient atténués dans la plus large mesure possible. Nous y reviendrons tout à l'heure.

Les syndicats ne peuvent se satisfaire d'une augmentation constante des richesses si celles-ci ne reviennent pas en partage de façon équitable aux travailleurs qui ont contribué à les créer. Il y a donc une meilleure répartition du revenu industriel qui doit être considérée. Il serait d'ailleurs anti-économique, tout autant qu'anti-social, que les masses ouvrières continuassent à se trouver dans une situation telle que la part du revenu industriel qui leur serait attribuée n'augmenterait pas dans les proportions suffisantes et que la part revenant au capital augmentât dans des proportions plus considérables. La prospérité économique est d'ailleurs trop intimement liée au développement du niveau

de vie des masses que pour qu'un partage plus rationnel du revenu industriel ne soit d'ailleurs pas considéré comme une nécessité économique impérieuse.
L'amélioration du niveau de vie de la classe ouvrière qu'on attend de la rationalisation peut être obtenue soit par la diminution des prix, soit par une augmentation des salaires et traitements. Il est aussi fort possible que nous arrivions bientôt à une réduction du temps du travail.
En se plaçant au point de vue de l'activité économique on pourrait dire qu'une majoration des traitements et salaires est préférable à une réduction des prix, car le phénomène est bien connu qu'en cas de diminution des prix l'espoir d'une diminution plus grande provoque un rallentissement des affaires et entraine, par voie de conséquence, une diminution correspondante de l'activité économique, tandis qu'une augmentation des traitements et salaires provoque immédiatement une consommation plus grande et intensifie ainsi la production.
En tout état de cause la rationalisation doit conduire à un relèvement notable du niveau de vie des travailleurs et les syndicats ne manqueront pas de s'employer en conséquence.

Un autre point qui préoccupe très fort les syndicats est bien celui de la concentration financière. Il n'est pas contestable que le revenu national a sensiblement augmenté dans beaucoup de pays et que d'autre part les richesses semblent s'être beaucoup plus réparties qu'autrefois. Et cependant on constate partout que l'accumulation de la puissance financière se concentre en quelques mains. Les banques ont aujourd'hui, dans tous les pays, une influence considérable. Il est d'autre part bien connu qu'elles ne se limitent pas à une simple activité financière mais qu'elles étendent de plus en plus leur emprise sur l'activité économique. Il n'est pas d'entreprise industrielle ou commerciale qui ait dû avoir affaire avec les banques sans que celle-ci posent comme condition d'être représentées dans la direction afin de pouvoir la contrôler.
Le problème de la concentration financière se pose de façon d'autant plus grave que les grandes institutions bancaires ont, entre autre, une influence très grande sur les divers rouages de l'Etat, si bien que l'intérêt général peut être compromis au profit de la finance.
Il est cependant, à l'heure actuelle, encore assez difficile de se rendre compte des conséquences de la rationalisation sur les con-

ditions de vie du travailleur. Les faits nous manquent; ils sont du reste difficiles à établir, car il faudrait des recherches d'un caractère nettement scientifique, très longue et très minutieuse. Les syndicats s'en préoccupent, mais il faudra encore du temps avant que leurs recherches donnent des résultats suffisamment profonds pour être l'objet d'observations résistant à la critique scientifique.

On a beaucoup parlé du problème psychologique. On craint que par la mécanisation excessive de l'industrie, faisant de plus en plus de l'homme un rouage d'une machine, le travailleur ne se voit diminué dans sa dignité et ne se préoccupe plus, comme il conviendrait, de son développement social, intellectuel et moral, de la valeur économique et sociale de son labeur.

Le mouvement syndical se préoccupe d'autant plus de cette question que, dès son origine, il s'est employé à développer le sentiment de la dignité de la classe ouvrière et que le développement même de ce sentiment est un des éléments constitutifs primordiaux de toute l'activité syndicale.

Les syndicats visent à la démocratie industrielle; celle-ci suppose l'incorporation de la classe ouvrière organisée à la direction de la vie économique politique et sociale.

Il est impossible de réaliser cet idéal avec une classe ouvrière qui n'a pas conscience de sa dignité, de ses possibilités et de ses responsabilités.

Le problème du chômage a été traité en long et en large chaque fois qu'on a parlé de la rationalisation. Les syndicats constatent que dans les pays rationalisés le chômage s'est accentué dans un rythme qui correspond assez bien au développement de la rationalisation et que le chômage ne s'est pas, par la suite, réduit ainsi que les promoteurs de la rationalisation l'avaient laissé prévoir. Ici se posent diverses questions, notamment celle de l'assurance contre le chômage et du déplacement de la main d'œuvre en d'autres mots les migrations ouvrières, migrations continentales et transocéaniques.

Les syndicats pensent aussi qu'un certain travail de reclassement professionnel pourrait être envisagé. L'évolution de certaines industries est telle que la main d'oeuvre qu'elles emploient diminue sans cesse; les travailleurs devenus ainsi disponibles doivent chercher ailleurs une situation suffisamment lucrative. Le problème est d'autant plus grave que l'une des principales conséquences de la rationalisation est précisément de se passer

autant que possible de la main d'œuvre.

Nous avons parlé tantôt de l'influence des grandes entreprises et des concentrations bancaires sur la vie de l'Etat. Il est capital que ce dernier ne se laisse pas submerger, car sa principale raison d'être est d'assurer l'intérêt général. On recherche encore comment l'Etat pourrait le mieux garantir l'intérêt général contre ces concentrations. On a envisagé notamment en Allemagne un institut de fixation des prix; les prix fixés par cet institut sont des prix maxima qui ne peuvent être dépassés.

Un deuxième moyen c'est la publicité qui devrait être donnée à toutes les opérations de ces grandes concentrations industrielles ou bancaires.

Un contrôle de l'Etat est souhaitable et il n'est pas impossible qu'un jour vienne ou les cartels internationaux devront se soumettre à un certain contrôle de la Société des Nations.

Du côté ouvrier il est de plus en plus difficile d'aboutir au contrôle des entreprises autre que par la voie de l'organisation syndicale.

Certains, pour arriver au contrôle ouvrier, ont recommandé l'actionnariat du travail, d'autres l'actionnariat ouvrier, d'autres encore des conseils d'entreprise comme en Allemagne.

Nous pensons que le meilleur système est encore la participation directe des organisations syndicales à la direction de la vie économique et à la cogestion des entreprises. C'est d'ailleurs la seule méthode organique. Il est permis d'espérer que cela se réalisera si les travailleurs ont conscience de leur responsabilité et des grandes possibilités de réalisations qui résident dans l'action syndicale même.

L'I. R. I. a pour but principal de rechercher l'établissement de relations humaines et pacifiques dans l'industrie. Les syndicats poursuivent au fond le même but. Le mouvement syndical aujourd'hui cherche la paix industrielle.

Comme syndicalistes nous souhaitons que l'I. R. I. continue son action avec le plus grand succès possible et qu'il réalise son programme. Mais la paix n'est autre chose que "la tranquilité dans l'ordre". Il n'est pas possible que l'on dise que l'ordre règne, si dans notre régime économique la classe ouvrière n'occupe pas la place qu'elle doit occuper et si on n'est pas décidé à assurer le plein développement de ses facultés intellectuelles et morales et lui donner l'autorité économique politique et sociale qui lui revient.

C'est dans cet esprit que les syndicats luttent pour réaliser un ordre économique qui doit conduire à la paix économique.
Nous sommes persuadés que l'I. R. I. est dans les mêmes dispositions d'esprit.

CONCLUDING SUMMARY

BY MARY VAN KLEECK, VICE-PRESIDENT I.R.I., DIRECTOR DEPARTMENT OF INDUSTRIAL STUDIES RUSSELL SAGE FOUNDATION, NEW YORK.

In the divine discontent of labor lies a power to solve the coming great problem of humanity; the danger is that it should be the only power. This was said to our Conference by a German employer.

We seek a common line of collaboration between employers and labour in bringing forward scientific management and better industrial relations. This was said to our Conference by a French workman, an officer of a national federation of trade unions.

He went on to say that we find that common line in research into les lois éternelles*, through which we seek to know what is perfection, the perfection which lies in harmony, the harmony of music, the harmony of nature's laws, whereby a flower grows or the force of gravitation is understood. Through this research into eternal laws, the way can be found to release the creative forces of human beings.

And, quoting Jaures: "The harmony of multiplied human effort must and can supplement the power of genius."

From another person, not present with us, from Mrs. Taylor, the widow of Frederick W. Taylor, whose principles of scientific management, formulated as the result of his work in the United States, have been often quoted in this gathering, came directly to this meeting, through officers of the Association who met her in Paris, this message: Mr. Taylor was always anxious lest the interest in exact scientific procedure should develop faster than the inner attitude. For Mr. Taylor's concern was to produce greater happiness for the workers.

Those three quotations, coming from three different types of persons considered in their relation to industrial life - three different types of experience in three different countries of the world - I am tempted to present as the summary of this Conference.

But we have been hearing much of the functional organization of industry, and it seems to be my function to attempt a summary, and so I shall not shirk that function. I conceive of it as an effort to put into words the ideas which have emerged into our common consciousness. In attempting to express these ideas, I

* the eternal laws.

go back to the statement which Miss Fleddérus made to us on the subject of group relations in industry in our second session. These group relations, she said, are characteristic of the present and prophetic of the higher mass living toward which we seem to be tending. The interdependence and interaction of industry in all its complexity gives us - as was said at our Cambridge Congress and quoted by Miss Fleddérus - an opportunity for a highly developed social attitude.

What is a highly developed social attitude? That is the question which we have been seeking to answer, and as key words of our new thinking about industry several were put before us. It is about those words that I would like to centre this summary, grouping them a little differently: those which indicate a condition to which we have come as a stage perhaps, like mass production; those which indicate a certain form of procedure, - standa,rdization, rationalization, mechanization, combination; those which indicate attitudes, and the forms in which those attitudes express themselves, - cooperation, leadership, standards; and then those which describe activities, - functional, constructive, dynamic.

Human relations in industry are carried on within a framework of economic activities, and it is fruitless to consider human relations without understanding that bed-rock of the economic structure. The world is fed, clothed and housed and services are given to society through definite tangible activities directed toward manipulations of materials, machines, equipment and a network of communication, all of which are technical. It is only as we think of industrial relations within the actual economic order, that we can work out better ones.

Is it not true that our ethics were formulated in a very much simpler period of the world's history and have not yet had the newer formulation of the new day, whereas it should have the formulation of to-morrow; we should at least be thinking about the ethics of to-morrow. And to do so we must have a picture of what the industry of to-morrow will be. That is why we chose as our subject, not an intangible, idealistic construction of the laws of human conduct as they should prevail between human beings, but the methods of promoting satisfactory human relations in a scientifically organized industry, because we wanted to see in advance the tendencies and the trends in the new types of

effort which are being put forth to increase production and to produce better and more effectively, with less waste of materials and effort.

Naturally we must define in what form this movement called scientific management actually shows itself in industry. I shall not attempt to discuss the various definitions of rationalization and of scientific management, but only try to picture the efforts which are being symbolized in those words. Scientific management is easier to describe than this vague movement called rationalization, because scientific management actually developed out of long years of patient enquiry, which gave it precision in methods and principles. That was its history in a workshop in the United States.

I do not know whether everyone who hears of the Taylor System realizes that Mr. Taylor spent a quarter of a century in research upon the art of cutting metals. That was indicative of the type of mind which was his. The principles of scientific management were developed by the slow process of careful discovery. Out of those enquiries and out of the experience which was the fruit of laboratory experiments in applying a new type of scientific procedure to workshop problems, emerged certain principles which were summed up for this Conference by one of our members, the Managing Director of the Taylor Society in the United States. That Society has in it a nucleus of men who worked directly with Mr. Taylor.

The fundamental principles of scientific management, as thus described for us, are fourfold:

Research by management into all of the problems and procedures of management, including quality of materials, quality and type of tools to be used and, also, the procedures and forms of administration.

The purpose of research is the setting up of standards of performance and plans of procedure, which remain until experience shows that other and better standards should be established; these are the formulation of the best experience at the moment, determined by facts independent of the mere whim and judgment, often erring, of the particular persons engaged in the enterprise.

 Control, which means not control by authority but control

by knowledge which makes possible the adoption of standards and procedures revealed by research.

And then, finally, co-operation between all of the human beings engaged in the enterprise through such an organization of their work as enables each worker to perform his function in the best possible way.

Those are the underlying principles of scientific management, very far removed from some of the procedures which masquerade as scientific management but which are merely quick devices to increase production without the solid groundwork of organization of the enterprise. True scientific management recognizes this groundwork as the only safe basis for change in the processes of work or the rate of production.

Scientific management then has been defined by experience. Rationalization, as we must all realize after these days of discussion, is a phrase which has on the one side a theoretical, idealistic sound, the effort to apply rational processes to economic life; on the other hand a connotation of actual experience which has been characterized generally by combinations of industry stimulated by great difficulties in economic life.

Postponing for a moment any consideration of the bad results of rationalization which have been revealed in our discussions here, I would add to our definitions the one brought to us by the Director of the International Management Institute at Geneva, when he defined a scientifically organized industry as a group of enterprises supplying similar or allied requirements to society with a minimum of waste of effort or material, comprising in the word "effort" all the human considerations which are of interest to us.

Then I would add to this general framework of definition the statement which was made in a report of the I. R. I. to the International Scientific Management Congress in Paris a fortnight ago. Basing the report upon previous proceedings and conferences of the I. R. I., we pointed out that scientific management has often been too narrowly conceived as applied to tools and equipment, and that the next great step in its development must be to widen the scope of its potentialities through a deeper understanding of the meaning of human relations on the part of all engaged in industry. This is urged

not merely for the sake of human beings, as though they were a thing apart from industry, but it is essential in bringing about a truly rational organization of industry, which results from the proper co-ordination of all the factors in economic activity, technological and psychological, social and economic. This all-inclusive conception of co-ordination is the only safe guide in organizing industry. For an organization, like an organism, derives its power to function from this condition of proper co-ordination. When an organism or an organization functions badly, it is because something is wrong in this co-ordination of its elements. Satisfactory human relations, which, in the I. R. I. view, are satisfactory when they function in true harmony, cannot be left out of the definition or the practice of genuine scientific management, which, upon its bed-rock of materials, tools and equipment, must nevertheless be carried on always by human beings. The "Bestgestaltung der Industrie", which is the German text of the I. R. I.'s name, means such co-ordination as shall result in the best possible functioning of economic activities toward the end of supplying the material needs of society.

Why are all the countries of the world to-day thinking so intensely about this question of better organization of work. - about rationalization and scientific management? Obviously, because we have an economic world terribly disarranged by the war. Moreover, the war came before we had found out how to organize the industries of the world, for if we had found that out before the war, there would probably have been no war. This disorganization, this need for increased production and for a wider distribution of the products of industry, which is so pressing, causing such grievous suffering in many countries, is world-wide.

Here may I say a word which does not properly belong in the summary? It is about the United States of America, and it is a word which has not been said in the Conference. I have felt here and elsewhere in Europe that perhaps Europeans believe that the United States has no capacity for understanding the burdens of Europe because America has not suffered as Europe is suffering. It is, of course, true in a certain sense, though you must realize that the shadow of the war was very deep in the hearts of many in that country across the water.

As was said at the Cambridge Congress, America should not be considered as a separate country but rather as the end result of the movement of the peoples of Europe to a new economic environment which has created the United States of America as we know it to-day. Our separation during the war was as though part of the family were away in another place when a great catastrophe had occurred at home.

Moreover, with economic relationships as close as they are to-day, there can be no real economic security for the United States if Europe suffers economically. Again, all is not as well with the United States as appears in the reports of travelers who visit us for a brief period and see only our eastern cities and, in them, perhaps only the environment of prosperous-looking hotels. I am thinking of a convention of coal miners in the state of Illinois which I attended last March. The economic difficulties in the lives of these coal miners and their families do not reflect the alleged wealth of American labour. Practically all had come from Europe, or were the children of Europeans. The majority of the older men were English, Welsh, Irish and Scotch, but other countries were also represented. The British would have felt very much at home in that convention; and reports made there regarding unemployment in the coal mines of Great Britain, by an American leader of labour, who could say, for instance, "My brother is a miner in England", reflected the similarity of the problems on the two sides of the Atlantic. Those men had been suffering for years from irregular employment, from short time, from utterly inadequate earnings, from a community life which is far from what it should be; and this is in a b a s i c industry of the United States.

Then I am thinking of a strike which has occurred recently in a village of one of our southern states, Tennessee, a place called Happy Valley, into which came a European company. They had heard that labour was cheap in a southern state. The workers whom they employed were descendants of persons who had come over from England two centuries ago, and in the remoteness of life in the mountains many of their eighteenth century customs were preserved. They were drawn from these mountain homes into industrial life, stepping from one century into another. Efforts were at once made to speed up production and to get production cheap. A strike was the result. No one knows what will happen next in the textile mills of the South under these conditions of rapid industrialization. In North and South

alike the textile industry suffers much from depression, unemployment, irregular employment and low wages, as in other countries of the world.

Insecurity of life characterizes employment in great basic industries in the United States. It extends also to our newer industries. A recent study by the United States Bureau of Labor Statistics states that the automobile industry shows the greatest instability of employment of any of the industries thus far analyzed. The United States has not established, as you have in Europe, any social insurance except workmen's compensation for accidents. For unemployment no legal provision has been made, and only a very small number of companies have made any plans for reserve funds for periods of enforced idleness. We are a favoured nation in many ways, but we are not wholly without the problems of Europe. We are all involved together in world-wide economic problems having to do with efforts to increase production and to find a market for products. It is true that some progress has been made in the United States in the realization that higher wages increase markets and that shorter hours raise the standard of living and hence, again, increase demand for products. Perhaps we have stumbled upon that fact. It is something that we can say to Europe with confidence, in the hope that throughout the world there may be a raising of the standard of living, because that is the only sound basis for our economic life.

So much for America. We need the thinking of Europe on the problems of America. We need to think together about world problems and the place of America in relation to them. In the I. R. I. we can freely discuss these international relations because we are conscious of the common industrial and economic life in which we are all involved.

Now what has happened in Europe and also in the new world in this movement called Rationalisation? It has, of course, taken many forms, as I have tried to indicate, but one of its characteristic forms seems to be the combinations of industries under unified control. Reference has been made also in this Conference to the increased concentration of financial control, and to changes which seem to be occurring in the forms and behavior of capital in our economic organization, so that to-day there is not the same sort of swift response of the movement

of prices to demand that once prevailed. The possibility is emerging that, through combinations, owners of industry may control prices and may sustain inefficient enterprises with high costs and low wages, without corresponding control of conditions of work by labour or the movement of prices by the consumer.

At least the changed conditions of mass production have brought changes in the old relationships of capitalization, price, wage and consumer demand, which are as yet not sufficiently explored to be understood. The new conditions have often resulted in unemployment, mechanization and the speeding-up of work, and the worker has been quite powerless, either individually or in his trade union organization, to keep his footing in economic life.

But the discussions here showed that the mere combination of industries was not sufficient to be identified with genuine scientific organization. Often such a combination is merely force in a new form; it is the effort to control by authority. That is not scientific organization nor rationalization in the true sense of the word. Force always is a lazy, stupid way of accomplishing an end which is, itself, too limited. It is usually an end which is selfish, and end and means alike are on a plane of life not yet sufficiently evolved to be scientific. The effort of nations to make their way by force has its counterpart in many relations of life, and there is a type of combination of industries to-day with concentration of financial control which is merely force in economic relations.

I do not wish to give the impression of believing that all large combinations of industry are manifestations of force. Far from it. What I mean to say is that if their aim be to increase the power of one group to control economic resources in its own interest without regard to the interest of employes or consumers, then combination is essentially an instrument of force. If, on the contrary, the purpose be the better performance of the task of production or service, it is quite possible that the best means may be a much more elaborate combination of industries, which would be, in essence, not force but r a t i o n a l o r g a n i z a t i o n.

But how is the rational organization of industry to be brought about? Let us get down to small things, the job in the workshop, because it is in the workshop, as was said at Cambridge, that

human relations are made, and from the workshop as a unit is derived the power to organize industry as a whole. I would briefly remind you of the discussion of "the job and its conditions". We had before us, first, an illustration of an approach through social science to a specific problem of working conditions, namely, to determine what is the best length of the working day. Assuming that changes in output reflect changes in the degree of fatigue of the worker, the Industrial Fatigue Research Board of England has made studies of the actual effect of shortening hours of work as measured by variations in output. Some of the results of this experimental research were presented to us with special reference to the five-day working week.

In the course of discussion it became clear that the quantitative measure of the effect of shortening hours upon output gave only a partial answer to the question, "What is the desirable working period?" If output is maintained at the same level in a shorter working day by increasing the speed of work, the question emerges, "What is a culturally admissible intensity of work?" Must not both the working period and the speed of work be so regulated that within every twenty-four hours enough time is left for recovery from fatigue, and also that enough capacity for fatigue shall be left over from work to be spent in recreation?

That in different jobs shortening hours affects output differently had, of course, been pointed out. If the task is largely handwork, the worker controls his speed, and his output is favourably affected by reasonably short hours. If work be the machine's task, then increased output should be obtained by improved technical equipment and the installation of the best possible machines to produce a given amount in a given time. This suggestion came from a worker. Increased output was not to be obtained by driving the worker to greater effort but by studying the means by which with less effort the output would become more satisfactory. In short, mechanization has brought industry to the point where increasing output depends upon technical equipment and methods of management; so that the case for shorter hours of work rests not upon the argument that the worker's capacity for speed increases when he is freed from excessive fatigue, but rather that mechanical improvements make possible a socially desirable decrease in working hours.

 In determining what is socially desirable, the question expands

into consideration of the need of the worker for leisure time, the effects of long hours upon family life and upon the life of the community. This is but one of the conditions of employment in which a factual basis for decision, valuable as it is, must be supplemented by the evidence from experience given by the workers themselves. This evidence from experience can be made fully available in the management of an industry only through some sort of participation of the workers in determining the conditions of the job.

So we turned to the question of labour's participation in management. We saw that in all countries there are various forms of organization already in existence which give representation to labour, but that as yet the will to use them is weak. In many industries we have not yet emerged from the period in which, as one representative of labour here expressed it, the workers are blindly reacting against intolerable conditions. We are still a long way from a situation in which the organizations of labour will be given a functional place in industry, enabling them to take their part in the determination of policy and its application in practice. Nevertheless, though this is in general true, happily we have illustrations of the functional responsibility of labour. Experience in these factories seems to show that there is no essential contradiction between scientific management and self-government in industry. Rather, as the Director of the International Management Institute has said to our Conference, self-government in industry is a means of cultivating in the worker the scientific attitude of mind. It is also a means of giving the worker confidence in the decisions of management, without which the organization cannot produce most effectively.

From the possibility of labour's participation in management we turned to the question of personnel policy and procedure as administered in a scientifically organized enterprise. It is impossible to do more at this point than to recall the underlying fact brought out in the presentation of this subject, that through the functional organization of industry, which makes it possible to base decisions upon facts and not upon mere opinion or guesswork, there is set up an entirely different significance in the words "management" and "control". Management, as was pointed out to us, means to plan, to contrive. Have we not often thought of management as meaning to manipulate, to boss? In the factory which has really developed its plans and proce-

dures of organization in accordance with the principles of scientific management, there is, as Frederick W. Taylor said, "one master, and that is knowledge". With knowledge as the master, the word "control" assumes an entirely different meaning. It becomes not the force of authority but precise guidance by knowledge which is formulated through a study of experience.

Under such conditions, where the whole administration of an industry is based upon knowledge and in turn makes this knowledge available as a guide for daily practice, the conception of management changes and human relations can find a basis of co-operation instead of consisting largely in the effort of those in authority to control the activities of those whom they supervise. This new conception of management has not yet been applied to a whole industry. It has been exemplified in individual establishments, but we have not yet discovered the way to take the whole coal industry or the whole textile industry and give it a truly rational organization.

The same principles which apply to an individual establishment would seem to apply to an entire industry. But lacking such an application, we cannot demonstrate from experience the results of the rational organization of an industry. We can only talk about industry in the process of becoming rationally organized. But we can begin to see the outlines of the dream which the Director of the International Management Institute was sketching for us at the close of his paper. If the purpose in forming large combinations of industry were more effective service or production, lower prices to the consumer, higher wages to the workman and more secure and hence more satisfactory returns on investment, then the problems of financial arrangements in relation to the management and control of production and distribution would settle themselves on the basis of scientific procedure directed toward the end of serving the community.

This may be a dream, and we may be as yet only semi-conscious. But there is enough experience in industry to make us believe that the dream reflects the tendencies of which we must become increasingly conscious. We cannot see very far ahead, but we can see far enough to know that we can begin at once in the workshops to adopt new procedures based upon the changed attitude of truly scientific organization. Out of these procedures we shall evolve the experience for wider controls.

We have formulated no program to suggest as the result of this Conference. Our discussions all point, however, to the importance of developing in our shops and in our industries such plans and policies of management as shall release the creative powers of those who work, in whatever capacity they may be employed. We need to release the power of the groups in industry not to make demands upon each other but to function together toward an aim which both share. Let me remind you of the statement in the report of the Cambridge Congress that the purpose of group organization is to preserve the integrity of the individual. It does not lose sight of the individual; it gives the individual larger power through the increased power of his group to function with other groups toward a common end.

Force must be given up, together with all the inadequate objectives of our economic life, if we are to develop a satisfactory industrial organization to meet the world's needs to-day. The industrial organization which the world needs is one which rationally serves society and all its members. None other is worthy to be the life task of men and women who work in industry with hand and brain.

SUPPLEMENTARY MEMORANDA

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE FIRST DAY CONFERENCE AS A MEANS OF COMMUNICATION AND UNDERSTANDING IN INDUSTRY: METHODS OF CONDUCTING CONFERENCES IN INTERNATIONAL ORGANIZATIONS AND IN INDUSTRY.

Subject: PROGRESS THROUGH THE USE OF DIFFERENCE.

Source: Extracts from the January 1929 issue of "The Inquiry", New York, submitted by Mr. John J. Hader who, together with Mr. C. E. Lindeman, is conducting the study referred to in the article.

There has been a good deal of talk in recent years about the arrival of a new form of collective negotiation, sometimes known as employe representation. Investigators of all sorts have given some report to the public at large both of various schemes of representation and of details concerning the workings of these plans as they affect the workers and the industry involved. Within the general structure of these plans there is one phase, however, which has received very little study so far, the one which interests us here and which is related to one of the chief concerns of the Inquiry, conference method. The kind of joint negotation which goes on in these joint committees of workers and management is not of so specialized a character that the results of study in this field may not find a large applicability in other forms of committee process.

Those conducting this study have asked themselves the following questions:

1. Is it possible to evaluate conference procedure from the point of view of the differences represented by the two groups in a joint committee (in this case, employes and employers or management representatives)?
2. In what areas of human experience do these differences lie?
3. How basic are the differences expressed in such conferences to the real wants and needs of the participants?
4. Do such differences actually interpenetrate in such conferences, and what ends are achieved thereby?

All of these points of inquiry may be summed up in one inclusive question, namely: What are the creative results attained in joint committees of this sort? Or, reversely, what creative results do they fail to attain and why? In order to find an answer to

this query it became necessary to invent a method of inquiry which would embrace the largest possible number of factors influencing the work of a joint committee.

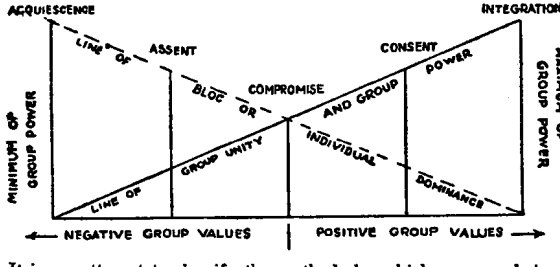
A group known to the investigators was holding a hearing to get from some of the workers' representatives their reactions to the proposals of the management for a change in the working hours. The purpose in this case was purely informational: that is, the management wanted to draw out from the workers their opinions as to the effect which the proposed changes would be likely to have. But, instead of dealing in a tactful way with these employes, the representatives of the management got into an argument with them; as a result, the meeting ended with a threat by the employe representatives of dire consequences if the proposed changes were made. In other words, a wall of resentment had been built up which could only stand in the way of future peaceful negotiations; and this was caused, as is so frequently the case, by a constant giving of opinion instead of the asking of questions and adhering to statements of fact.

Having formulated the above questions and many others concerning the actual conference processes of the groups to be studied, the investigators were obliged to ask next how they were going to get answers to these questions. Tentatively they adopted the following methods - comments on the validity of which are hereby invited.

1. The statistical analysis of minutes. This is a mass treatment of the available continuous records over a period of time, the principal item of which is an analysis of the subject matter discussed: how it was discussed (to determine the amount of group participation) and what kind of conclusion was reached.
2. By an analysis of selected cases. This is a detailed scrutiny of the important elements in each case from its inception to its evaluated conclusion.
3. By direct observation. Here the observer, as a complete outsider, attempts an analysis of what the group does and how it does it by noting the elements which those who participate are apt to overlook by reason of the fact that they are participants and therefore concerned in the result. The observer is not concerned with what result is achieved, but how it is achieved.
4. By consulting the participant observer. In this method the

analysis proceeds by asking certain members of the group what their reactions were to certain situations, thus getting at the factors which the investigator, where he is not a participant, finds it impossible to secure through personal observation.

One of the chief objects of this study is the testing of the concept of integration in group conflict. Is true integration, which accepts difference and then utilizes it, instead of repressing it, a desirable goal? If so, how can such utilization best be brought about? The following chart, which represents a hypothetical scale, is being used tentatively to evaluate the conclusions from many detailed data collected in the present study.



It is an attempt to classify the methods by which a group brings to a conclusion its discussion of any given subject. The two lines crossing at the center represent the growth of individual dominance and the growth of group power; each method gets its own kind of result.

The terms at the top of each vertical line describe the kind of result that the group has reached with respect to an item of adjustment. In each instance of an action taken, the committee reaches a conclusion which may be in the nature of Acquiescence, Assent, Compromise, Consent or Integration. These terms, of course, are more than descriptive: they include values or judgments. It is presumed, for example, by those conducting this study that these terms represent a graded scale in which Acquiescence is the lowest or least effective kind of conclusion which a group could reach. It is really a violation of any principles of "group" action. Integration, at the other end,

represents the highest form of agreement or conclusion, and indicates that the group as such is inventing or discovering new ways of reaching its ends. It is, in fact, getting plus-values in the emergence of the group's experience of collective thinking.

It is evident that, with the growing elaboration of our whole social structure, an increasing amount of our time and energy is destined to be spent in committee and other forms of joint activity. That there is a direct relation between the kind of individuals we are and the kinds of group process that we use cannot be denied. How far can this process be refined - made more scientific, more educative, more contributory to the growth of personality? These are questions which the Inquiry is seeking to answer through many projects of joint study, of which the one here described is, perhaps, so far the most thoroughly planned.

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE SECOND DAY WHAT IS A RATIONALLY ORGANIZED INDUSTRY?

Subject: PRELIMINARY STATEMENT REGARDING DEFINITION OF INDUSTRIAL RELATIONS.

Source: Special committee of the I. R. I. to define industrial relations: Dr. H. S. Person, Miss M. L. Fleddérus and Miss Mary van Kleeck.

Dr. Person states:

Groping among the impressions registered by my reading during the past thirty years, I find myself possessed of such stimulating hypotheses as the following:

1. Social consciousness of problems centering about the worker appeared in the United States at the time when, following the Civil War (1861-65), there was intensification of the transference of skill from workers to machines and the last fraction of the workers' equity in the tools of industry was lost to them. This removed from workers the asset of craft skill, made them more uniform and transferable, and essentially, in the manager's mind, a commodity like any other homogeneous material. At the same time industry became more productive and there was a gradual rise in the standard of living. To acquire its share in the greater national income labor was compelled to organize and utilize the method of force to improve its status. Industry became conscious of and began to talk about "labor problems". The word problem meant a problem for the owner and manager.

The concept of the labor problem gradually incorporated new elements as industry's concept of its management problems generally - compelled by circumstances - took new forms. And new words came into use to indicate new attitudes toward the labor problem.

2. The definite relation of these new concepts of the labor problem to management's general concept of its management problems and to management's general attitude toward labor may be indicated in tabular form as follows:

SUPPLEMENTARY MEMORANDUM

Chronology	General management problem emphasized	General theory of labor	Aspect of labor problem emphasized	Terminology
Period I	Necessity of mechanical efficiency	Commodity theory	Opposition to labor unions and rise in wages	Labor problems
Period II	Necessity of individual worker efficiency	Mechanistic theory	Welfare work Training Incentive wage	Personnel problems
Period III	Necessity of group co-operative efficiency	Good-will theory	Development and retention of workers' goodwill Reciprocity of relations	Industrial relations

This crude table is obviously suggested in part by John R. Commons' "Industrial Goodwill". It is not intended that the impression shall be given that the characteristics of later periods replace those of earlier periods; they are new characteristics added to earlier characteristics which survive at least in modified form.

This tabular analysis suggests that the term industrial relations (industrial employer-employe relations) has come into use because the word relations emphasized the reciprocity of responsibilities and rights in the contacts between employers-managers and workers, whereas the earlier terms labor problems and personnel problems emphasized a one-sided relationship in which the interests of owners-managers only were emphasized.

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE SECOND DAY WHAT IS A RATIONALLY ORGANIZED INDUSTRY?

Subject: DEFINITION OF A SCIENTIFICALLY ORGANIZED INDUSTRY.

Source: Memorandum submitted by Rita Hopf of H. A. Hopf Company, Management Engineers, New York.

A scientifically organized industry is one in which:

The business is maintained on an economically sound basis so that the dangers attendant on defying economic law will be avoided.

Management is in the hands of individuals or groups who have a broad business and social perspective, seeing things from many angles rather than with a particular bias.

The fundamental scheme of organization is simple and well integrated, with authorities and responsibilities clearly defined and carefully balanced.

Industrial relations have advanced to the point where it is an accepted fact that the welfare of the worker is not only a responsibility of the management but a condition of continuing success of the business.

Plant planning and maintenance are governed by considerations of health and safety of the workers as well as of effective performance of the work.

Methods and procedures have been studied with a view to installing the one best way of performing each operation and of integrating all operations.

Machines and equipment have been perfected to fit the requirements of the work and to conserve the health and strength of the workers.

The various functions of the business are so co-ordinated and controlled that work will flow through the plant as evenly as possible and a full work-day, work-week and work-year will be maintained.

SUPPLEMENTARY MEMORANDUM

Workers are placed at jobs for which they are best fitted physically, mentally and emotionally.

Workers are trained in their jobs and given ample opportunity for development to fill jobs requiring increased skill and involving increased responsibility.

Remuneration is based on value of work, skill in performance, responsibility involved, etc., and in all cases provides for at least a comfortable standard of living.

Workers are given an opportunity to share in the prosperity of the business (not necessarily by means of so-called profit-sharing plans).

Harmony is maintained between the management and the workers.

An inspiring quality of leadership is shown from the top down through all the supervisory levels.

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE SECOND DAY WHAT IS A RATIONALLY ORGANIZED INDUSTRY?

Subject: A. A CASE CONTRASTING SCIENTIFIC MANAGEMENT WITH CONVENTIONAL MANAGEMENT. B. WHAT IS SCIENTIFIC MANAGEMENT? C. A 1929 STATEMENT OF PRINCIPLES OF SCIENTIFIC MANAGEMENT

Source: Material submitted by Dr. H. S. Person, Managing Director of the Taylor Society, New York, and Councillor of the I. R. I. in the United States.

A. A CASE CONTRASTING SCIENTIFIC MANAGEMENT WITH CONVENTIONAL MANAGEMENT.

There has been a serious strike in the cotton textile industry of the South Atlantic States, U. S. A., during the spring of 1929. Although the strike is now in process of settlement, there will undoubtedly remain a serious tension in industrial relations in that region. The fact that certain mills have experienced labor trouble while other mills have been free from such trouble affords an excellent opportunity for a contrast between conventional and scientific management.

I. Conventional Management.

The striking workers based their action on managements' disregard for proper working conditions and an adequate wage; and specifically on the "stretch over" system, by which is meant an increase in the number of looms for which a loom-tender is made responsible. Owners and managers generally in the conventionally managed mills have operated on the assumption that it is labor's responsibility to give the production that will create profits. They have called in "efficiency engineers" who, without careful investigations of particular situations, have established arbitrary standards calling for increased productivity, without re-creating the conditions and facilities for work so as to make increased productivity possible without greater effort on the part of the workers.

It should be noted that in these conventionally managed mills an increase in looms per loom-tender from 60 to 75 has been the occasion for a strike. These figures should be kept in mind.

It should be noted also that back of this particular ill-will created by increase in the number of looms tended, and providing the setting for it, is a general ill-will created by factors in the total

situation which are irritating to the workers - improper living conditions, etc.

II. Scientific Management.

There is a group of Scientific Management cotton textile plants in the same region which have not been affected by the strike. We shall select one as typical of the group.

This plant was purchased by the present ownership about four years ago. At the time of its purchase the loom-tenders (for brevity we shall refer only to the weaving department) were tending 36 looms each. Today they are tending 110 looms each. How was this threefold increase in looms per tender brought about, and at the same time a good-will developed among the workers which has given the mill freedom from the strike prevailing in the region?

1. Increase in Productivity. This was brought about through the following steps:

a. Investigators attached to the staff of the new ownership were first assigned to the problem. These competent technicians investigated the particular situation and formulated standards with respect to product, raw materials, plant, equipment, processes, labor skill, wages, etc. These standards became the basis for all subsequent action, as listed below.

b. Functions requiring skill were separated from those not requiring skill. For instance, formerly the loom-tenders had three responsibilities: 1. changing warp beams (unskilled), 2. filling batteries with bobbins (unskilled) and 3. tying broken threads (skilled). The changing of warp beams and filling of batteries was assigned to unskilled labor, leaving to the loom-tenders the skilled job of tying threads.

c. Obsolete and imperfect equipment was replaced by the best modern equipment, and a system of inspection and maintenance established which keeps equipment in perfect condition and thereby reduces the frequency of breakage of thread. So thorough is this inspection and maintenance that each piece of equipment is completely taken down and reassembled at scheduled intervals.

d. A rigid system of purchase and inspection of raw cotton was established. This insures even-running material for spinning and even-running threads for the looms, thereby again reducing

the frequency of breakage. So important does the management consider this maintenance of quality of raw cotton, that high-grade seed is purchased by the mill and distributed at cost to contract growers.

e. Workers are selected and assigned in accordance with their skills, and improvement of skill is achieved through instructing foremen. These foremen are given opportunity for increasing their competence. Whenever one of the periodic meetings of the managers of the mills in the group is to discuss a problem bearing on a particular department, the foremen of that department are invited to attend and participate in the meeting.

f. The workers are paid an average wage which is approximately 23 per cent higher than the average wage in the mills of the region.

The result of these procedures is:
The number of looms per loom-tender has been increased from 36 to 110, or threefold;
The breakage of thread per loom per hour has been reduced to one-seventh of what it was when the mill was purchased and of what it is generally in the industry;
Therefore the amount of work which the loom-tenders have to do (because all work except tying threads has been given over to unskilled labor) is $3^1/_7$ or approximately one-half what it was when the mill was purchased and what it is in the industry generally.
The wages paid are approximately 23 per cent greater than those prevailing in the industry.
These circumstances give the technical basis for workers' good-will.

2. Living and Other Working Conditions. The activity of the management is not limited to the strictly technical matters described above. The researches are broad enough to afford a factual basis for other procedures, affecting the total situation of the workers, among which are the following:

a. By merchandise research, plant capacity (labor and equipment) is adjusted to the general market demand for the particular commodities, and operations are conducted in accordance with schedules based on detailed estimates of consumer demand. The schedule of operations is kept somewhat below the estimated

probable demand. The object of this is to assure continuous processing and regularity of employment.

b. When the property was acquired, the mill buildings were reconstructed and adapted as nearly as possible to the technical requirements of the processing and of workers' comfort in processing. The interior walls were painted white (and are kept clean by periodic repainting); provisions were made for proper heat, light, humidity and ventilation; suction cleaners were installed; and other essential workers' comforts made adequate.

c. At the time the property was acquired, special attention was given to the living conditions, for, the mill being located in the country, the management has to provide homes for the workers. Houses were reconstructed and made comfortable and bathrooms constructed. Streets were graded, resurfaced and planted. Churches and a movie theater were constructed. A section of the land was laid out for a golf course. There are in the offices of the plant, drawings which provide not only for future expansion of the mill, but also for future expansion of the village. On this map are indicated the location of future streets, parks, churches and other community institutions.

d. The workers are inexperienced in self-government because they consist of a mountain agricultural folk attracted to the plains by the new industrial development of this region. But as fast as they develop capacity for organized community life, they are encouraged to take over the self-government of these villages and other community institutions.

It is evident that there are three sources of workers' goodwill: first, proper community conditions which generate a general good-will reflecting the total situation; second, proper technical conditions which reduce the demands upon labor energy, notwithstanding higher productivity; third, a sharing of the increased productivity through higher wages, which make possible a higher standard of living. This is the reason why there has not been a strike in these Scientific Management mills which present so extraordinary an increase in productivity.

B. WHAT IS SCIENTIFIC MANAGEMENT?

It must be recognized that management is an art. A managerial situation is a complex of variable mixed with constant factors, and in no two situations are the combinations of factors the

same. Therefore each situation is a practical problem which must be solved by the practical sense (inferior, ordinary or sublimated sense) of the management. How, then, can management be "scientific"?

Scientific Management is sublimated common sense in mangement. Alfred Marshall has given us the cue:

"In every practical problem common sense is the ultimate arbiter. It is the function of common sense alone to propose a particular aim; to collect from each department of knowledge material adapted to the particular purpose; to combine the various materials; to assign to each its proper place and importance; and finally to decide what course is to be adopted. It is not the function of any science to lay down practical precepts or prescribe rules of life."

Scientific Management is, in the first place, that form of the art of management which is distinguished by conscious, continuous effort "to collect from each department of knowledge material adapted to the particular purpose; to combine the various materials; to assign to each its proper place and importance; and finally to decide what course is to be adopted"; whether the course involves policy, project, plan, procedure, facility, or these in combination.

In the second place, it is that form of the art of management which is distinguished by conscious, continuous effort to add, by research and experiment, to the accumulated knowledge of each department from which it is accustomed to collect material adapted to its purpose. No two managerial situations being the same as to the combination of component factors, the determination of conduct with respect to each situation requires research and experiment in interpretation, adaptation and application of the material, and therefore contributes to the store of information in pertinent departments of knowledge.

In the third place, it is that form of the art of management which is distinguished by the conscious, continuous effort to develop a dependable technique of adaptation and utilization of the materials of various departments of knowledge in determining conduct in particular situations, and of adding to the materials of the various pertinent departments of knowledge.

The principles of Scientific Management are generalizations concerning experience in these three phases of conscious effort; are descriptive of what experience has proved is sublimated common sense in resolving managerial situations.

SUPPLEMENTARY MEMORANDUM

C. A 1929 STATEMENT OF PRINCIPLES OF SCIENTIFIC MANAGEMENT

The following is an excerpt from Chapter I (by H. S. Person) of the forthcoming Taylor Society Book "Scientific Management in American Industry". *

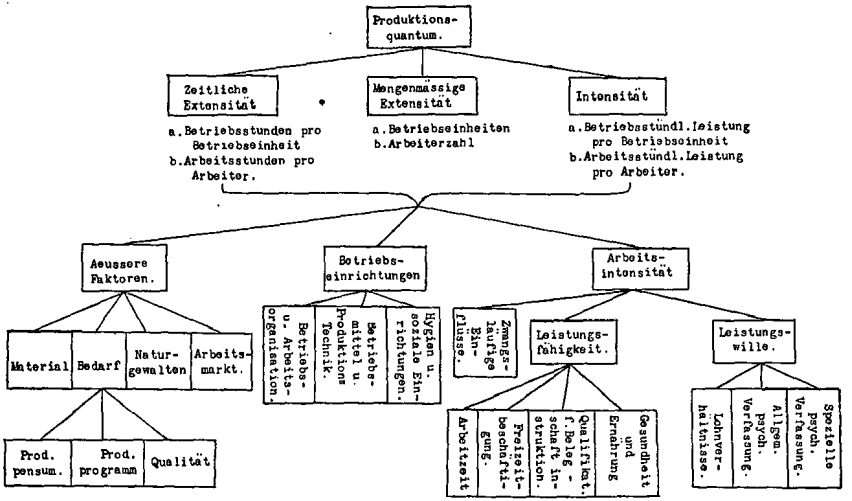
1. Management Research. Research, investigation and experiment (with their processes of analysis, measurement, comparison, etc.) constitute the only sound basis for the solution of managerial problems; for determinations of purpose, policy, program, project, product, material, machine, tool, type of ability or skill, method, and other factors, and the co-ordination of these in purposeful effort.

2. Management Standards. To make them useful to an enterprise, the results of research, investigation and experiment must be made available to the co-operating group in the form of defined and published standards which serve as common goals, facilities and methods, and which replace chance and variable factors by constants in terms of which may be made calculations and plans which may be expected to come true.

3. Management Control. There must be established a systematic procedure, based on the defined standards, for the execution of work; a procedure which directs the researches, establishes and maintains the standards, initiates operations and controls work in process; which facilitates each specialized effort and co-ordinates all specialized efforts, to the end that the common objective may be achieved with a minimum of waste of human and material energies, and with a maximum of human welfare and contentment.

4. Co-operation. Durably effective management requires recognition of the natural laws of co-operation; involving the integration of individual interests and desires with group interests and desires and of individual capacities with the requirements of group purposes; the substitution of the laws of situations for individual authority, guess and whim; and the recognition and capitalization of human differences, motives, desires and capacities in promotion of common purpose.

* Recently published by Harper Brothers, Publishers, New York and London.



Bedingungen des Produktionsquantums und der Intensität

Dr. O. Lipmann Februar 1929.

ERGAENZENDES MEMORANDUM ZUM THEMA DES DRITTEN TAGES ARBEIT UND ARBEITSBEDINGUNGEN.

Thema: BEDINGUNGEN DES PRODUKTIONSQUANTUMS UND DER INTENSITÄT.

Quelle: Für die Tagung zusammengestellt von Herrn Dr. O. Lipmann, Direktor des Instituts für angewandte Psychologie, Berlin.

Steigerung der Produktion und Erhöhung der auf den Kopf eines Arbeiters entfallenden Produktionsanteile können erreicht werden (vgl. nebenstehendes Schema):

1. durch Arbeitsintensivierung, d.i. Vermehrung des vom Arbeiter je Arbeitszeiteinheit geleisteten Arbeitsaufwandes,

2. durch Arbeitsextensivierung, d.i. Verlängerung der Arbeitsdauer des Arbeiters,

3. durch Betriebsintensivierung ("Produktivierung") d.i. verbesserte Produktionstechnik und -organisation.

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE FOURTH DAY LABOUR'S PARTICIPATION IN A SCIENTIFICALLY ORGANIZED INDUSTRY.

Subject: THE COLLECTIVE CONTRACT SYSTEM IN COAL MINING IN AUSTRALIA: TWO EXPERIMENTS.

Source: Memorandum prepared for the I. R. I. by Mr. F. R. E. Mauldon, Corresponding Councillor for Australia.

Two interesting experiments, one a failure and the other a success, have recently been tried in adjusting relations between employers and employees in Australian coal mines. The experiments involve what is known as "collective contracting".

I. At Catamaran Colliery, in Southern Tasmania, the owning Company found that it could not make a profit on the hewing rate that had to be paid, and so closed the mine. The representatives of the miners' lodge entered into an agreement with the Company whereby the latter agreed to pay the men collectively at the rate of 20s. a ton for run-of-mine coal. Inability to dispose of the "slack" (small coal), which represented about half the tonnage output, led to a revised arrangement whereby the Company agreed to pay 23s. a ton and to take 10 per cent of the "slack". But the remaining 90 per cent still remained to embarrass the mine workers, who succeeded in having the price raised to 23s. 9d., with the condition that all "slack" be left in the mine. Even so, the miners could not make wages on this price. Their demand for 28s. a ton, without "slack", was rejected by the owners, and once more the mine was closed down. Thus the first experiment in collective contracting came to grief on the rocks of costs.

II. The second experiment was begun last year at the Balmain Colliery, on the shores of Sydney Harbour, New South Wales. So far the experiment is showing happy results. Here the existing owning Company was reorganised and entered into a contract with the executive committees of the Balmain coal-miners' lodge and the Central Council of the Coal and Shale Employees' Federation. The collective interests of the men were represented by a Company, known as the Balmain Coal Contracting Company Ltd., formed by themselves with each member taking out a 5s. share. The contracting Company, as with the Catamaran miners,

appointed its own mine manager. It agreed to raise coal and place it "in skip", "on Lorry" or "in bins" at a definite price for a term of years, with the proviso that, should the selling price of the coal fall, there would be a pro rata reduction in the price payable to the contracting (miners') Company. So far the scheme has operated with success for both parties. The contracting mine-workers have almost unbroken work, are paid the ordinary hewing and wage rates, and are accumulating a reserve of profit which will presumably be shared as a bonus. Already their own management has pruned away unnecessary labour, with a consequent improvement of the ratio of men at the coal face to "off-hand" and surface labour and a saving of labour costs of round about 5s. a ton. No serious difficulties have disturbed the men's own management.

Conclusion.

It is evident from the two experiments so far made that collective contracting shows promise of partial solution of the problem of industrial disputes in the coal mining industry. The Catamaran experiment points to the over-riding influence of markets upon the possibility of earnings, but not to any weakness in the idea of collective contracting itself. If a market could have been found for the "slack" coal, it is considered on good authority that the rate of 20s. a ton would have paid the contracting mine-workers. The relations between the owners and the men were of the best, their common defeat by the conditions of the market notwithstanding. Both the Catamaran and Balmain experiments suggest the social value of fuller collaboration in responsibility. The experiment at Balmain indicates, not that every cause of disunion among either the mine-workers themselves or between operative and managerial functions will be eliminated, but that even self-interest may be made to minister to the collective good.

SUPPLEMENTARY MEMORANDUM ON THE TOPIC OF THE FOURTH DAY LABOUR'S PARTICIPATION IN A SCIENTIFICALLY ORGANIZED INDUSTRY.

Subject: CANADIAN NATIONAL RAILWAYS RELATIONS TO UNIONIZED LABOUR AND UNION-MANAGEMENT CO-OPERATIVE PLAN.

Source: Prepared for the I. R. I. by R. A. C. Henry, Director Canadian National Railways, Montreal.

The Canadian National Railways adheres to the Open Shop Principle in all departments but deals with its employees collectively in whatever way it finds expedient.

Through the Railway Association of Canada, of which it is a principal member, it makes agreements, in regard to working schedules and rates of pay, with:

1. Division IV of the Railway Employees Department, American Federation of Labour, comprising the various unions of the Federated Shop Crafts, to which belong the majority of the employees in the Maintenance of Equipment Department of the railway.
2. The Brotherhood of Maintenance of Way Employees, to which belong the majority of the company's track forces.

These are the only unions to which the company accords "de jure" recognition

There are a number of other unions to which the company accords "de facto" recognition to the extent that, considering them as organized groups of its own employees and not as integral sections of national or international unions, it makes agreements which, on behalf of the employees, are negotiated through and signed by the General Chairman of each organization, who must be an employee of the railway, and who is granted leave of absence for the purpose of fulfilling his duties as negotiator or representative.

These unions are:

3. The Brotherhood of Locomotive Engineers.
4. The Brotherhood of Locomotive Firemen and Enginemen.
5. The Order of Railway Conductors.
6. The Brotherhood of Railroad Trainmen.
7. The Order of Railroad Telegraphers.
8. The Order of Commercial Telegraphers.
9. The Brotherhood of Signalmen of America.

10. The Canadian Brotherhood of Railroad Employees, to which belong the freight handlers, station laborers, laborers employed in the Maintenance of Equipment and Stores Departments and, excepting those in Executive Offices, the majority of clerks in all departments.
11. The Canadian Brotherhood of Railroad Employees, Express Department.

There are a number of other unions, having a relatively small membership among the employees, to which no recognition is accorded, and with whose members, as such, the company refuses to deal.

Provision for the settlement of individual grievances which cannot be settled locally is arranged as follows:

If the complainant be a member of any union of the Federated Shop Crafts, his case goes to a joint board representing the Railway Association of Canada through its Sub-Committee on Wages and Working Conditions, and Division 4 of the Railway Employees Department of the American Federation of Labour.

If the complainant be a member of any one of the international unions number (2) to (9), his case goes to the Canadian Railway Board of Adjustment No. 1.

If the complainant be a member of the Canadian Brotherhood of Railroad Employees, his case goes to the C. N. R. Employees Board of Adjustment No. 2.

In all cases the decisions of the joint boards are final and binding.

Disputes arising out of collective negotations on wages and working conditions which cannot be adjusted by the disputants themselves are, by requirement of the amended Industrial Disputes Investigation Act and of supplementary provincial legislation, submitted to a Board of Conciliation appointed by the Minister of Labour of Canada.

General remarks.

The purpose of the plan is to give practical effect to the principle of co-operation for mutual benefit, chiefly through the stabilization of employment, the improvement of working condition and the bringing about of economies in operation. The consideration of grievances is expressly excluded from its scope and controversial matters are avoided.

The plan either has been or is in process of being applied to all employees of the Maintenance of Equipment and Maintenance of

Way Departments or, speaking more loosely, to the shop and track forces. The Canadian National Railways recognise the American Federation of Labour Unions, but maintain open shop, and, while none but members of these unions may take any active part in the plan, decisions of committees affect all concerned, irrespective of their union affiliations.

Maintenance of Equipment Department.

In 1924 the Railway Employees Department of the A. F. of L. suggested to the Management of the C. N. Railways that this plan be given a trial and, after the completion of a survey conducted jointly by representatives of both parties, it was introduced at Moncton, N.B. in February 1925, and rapidly extended over the System until, by August of the same year, co-operative committees were functioning in the thirteen major locomotive and car repair shops. During 1927 further committees were formed at roundhouses and car repair points, whose personnel numbered 50 or more, and by the end of 1928 sixty-four local committees had been organized.

Each local committee consists of one representative from (and appointee of) each craft, together with an equal number of representatives of the Management. At the smaller points there are usually three employees and three management representatives. These committees meet either once or twice each month under the chairmanship of the senior management representative, either the shop superintendent or local storekeeper. The common practice is for suggestions of individual employees to be discussed with fellow craftsmen at the local lodge of the union and, if generally approved, to be brought to the attention of the management at the next meeting of the local committee.

Should a suggestion be brought up which, for any reason, cannot be settled by the local committee, it is referred to a regional committee consisting of the regional mechanical officers and regional representatives of the Federated Shop Crafts. This committee meets usually twice a year, at the call of its chairman, who is an appointee of the Regional General Manager.

If any questions arise which cannot be properly decided by the regional committee, they are referred to a committee of System mechanical officers and System representatives of the Federated Shop Crafts. The personnel of this System General Committee is so chosen that every region and every craft has a representative upon it.

Appointments are made annually. All meetings are held on com-

pany's property and employees attending are considered to be on regular duty and paid accordingly. The Company also pays the expenses of those attending system or regional meetings.

As a measure of the value of the plan to the railway and the progress it has made, the following comparison is of interest:

During 1926 there were 1532 suggestions broached, 1235 adopted.
" 1927 " " 1713 " " 1265 "
" 1928 " " 2431 " " 1687 "

The prime value of the plan to employees has been the almost complete stabilization of employment. In addition, the Company has recognized the co-operation of the employees by granting a week's vacation annually, with pay, to all those having a minimum of two years' service.

It is worthy of note that since the adoption of the plan, grievances coming to the attention of the Grievance Committees have fallen off 75 %.

The total number of Maintenance of Equipment employees, who are affected by the plan, is approximately 26,600.

Maintenance of Way Department.

In 1926 a similar offer of co-operation was made by the Brotherhood of Maintenance of Way employees, and was at once accepted by the Management. Following a jointly conducted survey, a plan was agreed upon, which will be initiated this coming June (1929) on the Moncton Division and extended as rapidly as possible to the entire System.

Owing to the difference between the Maintenance of Way and Maintenance of Equipment Departments as regards working conditions, the plan as applied to the Maintenance of Way employees will differ in some details from the plan already in operation. Its final constitution will be dictated by the experience of the pioneer committee about to be organized on the Moncton Division. The total number of Maintenance of Way employees who will be affected by the plan is approximately 28,700.

Total Number of Employees on Canadian National System Dec. 31, 1928.

Maintenance of Way	28,978
Maintenance of Equipment	27,732
Transportation	35,595
General	16,487
Total System Employees	108,792

THE AESTHETIC RESULTS OF RATIONAL METHODS IN FACTORY BUILDING

BY C. H. VAN DER LEEUW, PRESIDENT I.R.I., PARTNER MESSRS. DE ERVEN DE WED. J. VAN NELLE, ROTTERDAM.

It is an interesting fact for the observer that the necessity of adopting the most rational methods in production and the ever growing stress laid on the needs - not to mention the rights - of the worker to hygienic and agreeable surroundings meet with such ready response in what is nowadays known as modern international architecture.

This style is not peculiar to any city or country: though its adherents still show their own characteristics, their work is evolved along similar lines, resulting in the specific type of building, specimens of which are nowadays to be found in most countries.

Whilst in olden days the aesthetical aspiration of the architect and the technical wishes of the manager often clashed, the modern architect's attitude is generally one of service in carrying out these wishes, which he considers the very basis of his work.

I will not enlarge on this; current literature gives these principles together with names of architects and illustrations of their work.

I only want in these few lines to give some data on a recently built factory and office building, which has enabled me to prove the practicability of the new methods.

Though the architects have of course striven after a harmonious solution of the various elements, first and foremost attention has been given to the structural outlay from the point of view of production and, last but not least, from the point of view of the workers who are to spend the best part of their days inside these buildings.

And judging from the opinion of the workers and of the managers as well as from the criticisms of visitors, I think I can safely say that harmony in building can be wedded to the most severe technical and humane desiderata. I can even go so far as to say that the interaction of the following three driving forces - the human rights of the workers; the technical needs of the machinery; and the striving of the architect after harmony both in the interior and the exterior of the building, results in mutual benefit. "Functional building" has won its case against "Facade building".

SUPPLEMENTARY MEMORANDUM

The following particulars may be of interest:

Firm: de Erven de Wed. J. van Nelle (generally known as "van Nelle"), Rotterdam.

Architects: Messrs. J. A. Brinkman & L. C. van der Vlugt.

Address: 89, Nieuwehaven, Rotterdam.

Area covered:

Built and in course of construction	13.000 M².
Further plans	3.000 M².
Reserved for extension	20.000 M².
Roads	17.000 M².
Sportsground	29.000 M².

Cubic content of building and quantities of material:

Total cubic content built and in course of construction	about	200.000 M³.
Floor space	„	50.000 M².
Concrete used (not all buildings are of reinforced concrete)	„	15.000 M³.
Plate glass	„	10.000 M².
Imit. plate glass	„	9.000 M².
Number of concrete piles used	„	2.000

Electricity: supplied from municipal works and only transformed from 5.000 V to 220/380 V.

Heating: throughout by hot water.

Lighting: generally 50 Lux at workbench height with systematical provision for auxiliary lighting throughout the buildings wherever necessary near machinery. Office 100 Lux.

Piping and wiring: in underground canals and vertical shafts at corners; as far as possible in floors.

Windows: steel sash being one with the steel walls (which have no structural function but only serve as enclosure). The windows have no obstruction by horizontal bars at eye level when looked through either in standing or sitting position.
The photographs which follow will further elucidate the above.

1 Meter = 3.28 ft. 1 M² = 10.75 Sq. ft. 1 M³ = 35 cub. ft.

TRANSLATIONS

THE JOB AND ITS CONDITIONS

BY ERICH LÜBBE, VICE-PRESIDENT I.R.I., PRESIDENT WORKS' COUNCIL, SIEMENS-SCHUCKERT A.-G., BERLIN-SIEMENSSTADT.

It is with some diffidence that I speak before a circle of persons with an expert knowledge of a subject which is being examined by hundreds of committees and investigated with every available means of scientific method and techniques.

In speaking about work and its conditions, a scientist would probably begin by tracing with deep and scientific logic, the development of mankind. I must ask your forgiveness if I do not proceed in this manner and also if my practical presentations are not everywhere carried through with the strictest logic.

Allow me to enter straightway into practical realities by at once giving you the workers' view of all the various scientific studies being made regarding their working conditions. My experience in actual everyday life is to hear repeatedly from the workers that the more committees occupy themselves with the task of examining conditions of work, the worse it becomes for the workers. And if I may add here my own personal opinion as to whether the workers are justified in this view, I can only say that I consider there is no doubt whatever that the workers do not reap the chief benefit of the results gained by such investigations.

In considering the actual work itself it is necessary to differentiate between three methods of work, namely:

1. handwork done without any technical appliances, but only with the help of tools worked by hand;
2. work done with the help of machines, and
3. work done by machines replacing the worker who has only to give slight manual assistance, and work on a moving belt.

The first two methods can be considered together and we may state, although with some reservation, that the intensity of work performed according to these methods is determined by the worker himself who naturally receives his impulse from the foreman, overseer or head of department, who themselves form part of the work process.

Furthermore, the intensity of work determining the quantity of work done during a certain time depends upon the will to work of the individual worker. This "will to work" is influenced by different elements. As Herr von Haan has already presented a paper containing many of these factors, I can restrict myself to underlining some of these factors, from knowledge gained by practical experience.

The individual's will to work is in the first place lessened by influences not due to work and I name here as first in importance, the influence of family life. This influence may be either a help or a hindrance. If a workman has cares and troubles in his family, his zest in life is naturally diminished with a corresponding diminution both in the pleasure he takes in his work and in his will to work. Further contributory factors which lessen his joy in work are illness, an unfriendly work place, unsatisfactory intercourse with his work-mates, and so forth.

The special question of wages in their influence on the will to work will be treated separately.

THE JOB AND ITS CONDITIONS

The length of the working hours also exercises an influence upon the will to work. I will not here speak of the main question of working hours (the 8-hour day, the 7-hour day) as this subject will receive special treatment later on in the meeting. I will, however, give you just one example to show you what a keen interest the workers themselves take in this question and in that of how working hours should be divided.

The German law requires one hour's interval for the midday meal in all factories where women work for more than 8 hours in the day. In the post-war period the introduction of this one hour midday-pause aroused violent opposition on the part of the workers. From a scientific point of view those hygienists and doctors most in sympathy with the workers, pointed out again and again that work done without a pause is in the long run detrimental to health. In spite of this, however, it was in practice always urged that the pause be shortened as much as possible so that the stay in the workshops need not be longer than absolutely necessary. The firm's representatives are naturally unable to judge whether a shortening of the pause is really harmful to the health of the workers or not.

We must now turn our attention to those factors which act as a stimulus on the worker's will to work. Among these, by far the greatest part is played by wages which may in fact be regarded as practically the ruling influence. Indeed one would not be far from the truth in stating that every single motive tending in the direction of increasing the will to work is ultimately based on the thought: how can I enlarge my share in the product? In our present form of industry labour has become a commodity for sale like any other commodity on the market, and as every merchant wishes to sell his wares as profitably as possible, so the worker endeavours to do the same. If in pre-war times, during a favourable turn of the market and by standing fast together, the workers were able to take from the employers a larger share of the produce, the latter have very soon recognized their own weakness and have counteracted the power of the workers by forming organizations in their turn. In order therefore to obtain higher wages and better working conditions to-day, not only is a favourable turn of the market necessary, but also a favourable balance of power between the respective organisations.

The industrial struggles resulting from this measuring of force on both sides has led in many cases to hardship and difficulties for both parties, and it is one of the privileges of the I. R. I., by its recognition of both standpoints and through making use of all possibilities of discussion, that it is in a position to try and bring about a better understanding. In order, however, to achieve the utmost possible in this direction, it is essential that the I. R. I. shall endeavour to obtain exact knowledge of the whole matter.

In dealing with the question of wages, the system of payment must be examined. The development of the method of paying wages is well-known. In former decades and centuries, weekly and even monthly wages were paid for manual labour, often combined with what is known as emoluments in kind. A rise in income mostly depended upon an increase in output. This again depended on the initiative of each worker, as tools and machinery were only available in a very limited number.

With the development of industry in the middle of the last century, the employers were no longer satisfied with a voluntary increase of output on the part of the worker, and payment by piecework was introduced. As a result, the payment of weekly and monthly wages gradually disappeared and the payment of workers by the hour became customary. Those in Germany who helped to introduce the system of piece-work or payment by result, will know how much opposition and dissatisfaction this form of wage-payment called forth among the German workers. "Piece-work is killing" ("Akkord ist Mord") was the rallying cry with which workers united against this method.

But the development of economic life as well as the rapid development of industry, forced the workers to be content with this form of payment, and to-day the fight of the Trade Unions is mostly limited to keeping in check the abuses of this system.

The level of wages for piece-work was formerly fixed by the foreman on the basis of his own practical experience wtih the help of some sort of established rules. The worker then bargained with his employer about the rates thus offered until an agreement was reached. There were no scientific data to draw upon, only rates based upon experience.

Even before the war, the introduction of the Taylor system led to the use of the stop-watch. I do not consider that the use of the stop-watch can be regarded as a scientific test, and the rough valuation of the results attained led to the most violent opposition on the part of the worker. It may be perhaps not quite without interest to touch for a moment upon the question of how the workers now regard the stop-watch. Opinion on this point is very divided among the workers, and I have the impression that their standpoint largely depends upon the manner in which the investigator comes to his conclusions. For example, one day I received information of a strike leading to a lock-out. In one department of a large concern the girls simply downed tools because the investigator tried to take time-studies with a stop-watch in his hand and it was only with the greatest trouble that the difficulty was resolved. On the other hand, elsewhere in the same factory, the investigator was able to make his studies quite openly without occasioning the slightest dissension. Again and again complaints are brought forward because the time which is spent in taking hold of the tools - for example clamping and loosening steel - and in fetching the tools etc., or through defects in the material, is not allowed for. If the investigator takes these factors into consideration and, in the case of a dispute, is sensible enough to give an explanation, then a certain amount of satisfaction may possibly be found among the workers.

In this connection, I would like to draw attention to the fact that more human qualities come into play belonging to the piece-work system than is generally supposed to be the case. Most human beings possess a certain amount of ambition, and the workers, no less than others, have the ambition to prove that the investigator, who has taken every care to estimate objectively the price of an operation has, after all, calculated wrongly! This leads to the earning of record wages and it is just here that the greatest piece of folly is often indulged in by the employers in continually lowering the piece-rate. This naturally causes the workers to lose confidence in a just return for their labour, and if the workers see clearly from the beginning that it is simply impossible for their

ambition to achieve its result, dissatisfaction will inevitably reign from the very start.

In addition to piece-work, there exists in Germany a number of other systems for the fixation of wages. Whether these are ideal systems which under every circumstance give satisfaction to the workers, I cannot say, as I am not familiar with any of them. Premium-systems have been introduced in Germany, based on the fact that a premium was paid not only for the quantity but also for the quality of the work. According to information received on the subject, this system works well in the incandescent lamp industry. I have also heard something of the system known as the Bedeaux System, introduced in Germany several years ago, but cannot tell you anything of its results. I should however myself be interested to learn something about this system and should therefore welcome hearing from those present any experience they may have had in this connection.

The latest and most modern method of work is the conveyor or moving belt system. Much has been said and written for and against this method. Judging the question from a practical point of view, I believe that one cannot overlook the fact that the monotony of this work is felt by many persons to be simply unbearable. The intensity of work at the belt no longer depends on the will of the individual worker, as the speed is determined by the management, and this decision in its turn is dependent upon the total number of workers occupied at the belt and involves the most complete organisation of every part of the work. In view of the fact, however, that the will of the individual is thus completely ruled out, the question necessarily arises as to whether under such circumstances it is still possible for the worker to find any satisfaction in his work. In stating just now that many workers cannot endure the monotony of this kind of work, it must on the other hand not be forgotten that there are a great many workers who do not wish at all to think independently and who are content if the method of handling the work is exactly shown to them and rules given, so that they can indulge in their own thoughts while at work. This observation clearly shows how necessary it is in this, more than in any other kind of work, for the choice of persons to work on the moving belt to be a right one.

After having become acquainted with the different forms of work, it is necessary to consider how far it is possible for the worker to derive a certain amount of satisfaction from this work. In examining each supposition, one comes repeatedly to realize that the fundamental condition for joy in work consists in the choice of the right profession. In view of the political confusion and economic difficulties in which the workers live, it seems absurd to speak of joy in work. In spite of this, however, it must be noted that a larger number of workers than is generally supposed find something akin to joy in their work. Thus the handworker very often finds joy in his work and this joy can be most augmented if he is in the position to realize the significance of his work. The machine worker finds joy in the speed of the machine. It is however very much more difficult to speak of joy in connection with work at the belt. But even here there may perhaps be satisfaction

for those whose ambition is based on the desire to accomplish a certain quantity of work in the shortest possible time It seems however necessary to introduce an interval of 10 minutes after each hour's work.

Not only should the signs of satisfaction in work at the factory itself be noted, but also all the conditions connected with work. Amongst these the question of sufficient and paid holidays is of importance. Industry is only slowly and reluctantly beginning to see that the worker in the workshop needs holidays in which to recuperate just as much as the office employee, to whom they were accorded much sooner.

In this connection we come back to the problem which has already been discussed, namely that of the five-day week. The proposal for a five-day week has several times here been discussed. Mr. Dubreuil sees no advantage in lengthening the daily working hours. Herr Mars is of opinion that the human body recuperates its energy daily, so that one cannot really speak of a weekly accumulation of fatigue due to work. With this opinion I cannot agree, as in such a case we should no longer want either Sundays or holidays.

In the discussion on the five-day week it would have interested me to have heard somewhat more regarding the practical results of this system, under American conditions. In Germany there are only a very few instances where the five-day week has been tried. Only now, and after the most desperate battles has Germany achieved the eight-hour day. The German workers would therefore be strongly opposed to any lengthening of the working day as such, and if the five-day week can only be attained on the basis of a 48 hour week, thus necessitating a working day of 9¾ hours on certain days in the week, the whole matter is out of the question as far as Germany is concerned. If to these 9¾ hours is added an average of one hour for the journey to and from work and another hour for the midday pause, a working day of about 12 hours is the result. Such working hours obviously cannot come within the range of reasonable discussion. It is, however, just possible that the workers might be willing to work 9 hours each day in order to gain an absolutely free Saturday. But in that case the weekly working time would be reduced to 45 hours which, in this era of rationalisation, seems hardly possible from an economic point of view. Moreover this 9 hour day I hold to be impossible on practical grounds, which have demonstrated that with 9 hours daily work the optimum output can only be achieved on the condition that Saturday is a complete holiday. If, therefore, the 48 hour week must be maintained, I do not see any possibility of introducing the five-day week.

I should like to draw attention to another matter which offers a means of providing increased satisfaction for the workers - at any rate for a small part of them - and that is the possibility of promotion within the factory. In this era of rationalized working methods, the employer frequently passes over his own able workers and gives positions of authority to outsiders. This is doubtless often necessary in isolated instances, but with good will and the right psychological understanding of the requirements of the business, many a hardship and discontent of the worker thus overlooked, might be avoided.

If I began my practical comments by referring to the opposition of the

workers to the numerous committees everywhere in existence, I would like to end by expressing the hope that the I.R.I. may be able to contribute towards making the knowledge gained in these committees of real practical service to the workers. Only in so far as rationalisation results in advantages and reforms for the whole working class, will the community as a whole be able in the long run to withstand the evil effects which rationalisation brings in its train to numbers of workers, and it will be one of the finest tasks of the I.R.I. to assist in preparing the way for the workers to reap such benefits as are possible.

INDUSTRY - A SCIENCE AND AN ART BY H. DUBREUIL, SECRETARY GENERAL CONFEDERATION OF LABOUR, PARIS

What is the common direction for joint efforts in favor of scientific management and industrial relations? We have come together from different countries and from different occupations, but in spite of that we have found a central line of collaboration.

We have before us two purposes, material and ethical. On the one side we have the question, how to augment productivity. To this end we apply the old proverb that it is necessary first to live and then to philosophize. But there is another old wise saying, that man does not live by bread alone. Work should go hand in hand with happiness, and together we should try to discover the deep-lying sources of productivity and of joy.

Today in the vast amount of current literature much is said about the mechanization of labor and its resulting monotony. My personal experience has been that, for instance, in the Ford factories, which are probably the most mechanized establishments in existence, and where processes are monotonous, the workers' intellects are not asleep. I was at the Ford works at a time when the old car was to be abandoned and the new model was being planned. A difficulty arose in its construction, which held up the whole process of production. The engineers had racked their brains to find a solution. Finally a simple workman found it.

Not long ago, I spoke with a captain of industry from Roumania. In that country mechanical industry is new. The peasants who for centuries had been immobile on their lands had been drawn into the cities to work in modern factories. In the weaving plant of a large textile mill, a simple peasant was able to propose to the management a mechanical contrivance whereby his own production was increased from 30 to 40 per cent. This is only one illustration showing that the complaints about the deadening effects of monotony are not altogether justified. The intellect of the worker is not thereby entirely annihilated. Indeed, it may be wide awake under these conditions.

Rational methods need to be applied to our own work. We find a basis of collaboration in scientific research. It is particularly important to study the evolution of human labor throughout history. From the past one gains much that is suggestive for understanding work as it will take shape in the future. In olden times workers were treated like cattle. The whip was used on a slave as on the horse or the ass. If the output of these slaves were studied, it would be found that their efficiency was far below that of a modern worker. Similarly, with the serfs in Europe, undoubtedly the productivity of the agricultural workers was small under conditions of serfdom, when he was not allowed to move from the ground to which he was attached. By careful study of history on lines such as these, it could certainly be established that the capacity for production increases, the higher the form attained by social life.

A century and a half ago, when machines and mechanical appliances were first used in production, the attention of certain minds, especially in England, was drawn to the ill-effects which came to the workers through these changes. Robert Owen, for instance, gave particular attention to solving this problem. It is regrettable that we do not study more his

ideas and his experiments, but allow them to sink into oblivion. I would also like to remind you of Godin, a Frenchman who studied these conditions, and proposed remedies for what appeared to him to be the evils of his day. Why did all these efforts of the nineteenth century fail? We ought to study the reasons for their non-success.

Now let us consider the last link in the chain of these developments. The effort of the present is toward democracy in industry. We see this movement exemplified in the Cadbury or Rowntree factory in England or the Dennison factory in the United States. It is important to study what is good and what is bad in all these experiments and why this plan or that plan has failed. Research must also concern itself with the facts about labor and particularly with the forms of organization of labor and the literature which gives expression to its ideas. There we find evidence of the evolution of the point of view of the workers. In the early days of the nineteenth century in England or in France and through the years which have followed, we find that the efforts of labor have been at first a mere reflex action, entirely an action of defence caused by the conditions of work and life. Now after these years of evolution we have arrived at the point where labor is free from some of these conditions and is ready for a new goal.

The need now is for leaders of labor. There are many workers who never see beyond the walls of the shop, but the leaders of labor in their task of coming to an understanding with employers gradually gain a wider view. It is as though they were climbing the sides of a pyramid, and as they go higher they see further, but at the same time they endeavor to let those who are below them see what they see. In this way the leaders of labor have certainly succeeded in France and also in other countries, in widening the outlook of the workers generally.

The war has been a great teacher for labor in all countries. We are now understanding that the processes of rationalization which were applied to the war must be used in times of peace and that through these methods labor will ultimately be able to reap the benefit.

It is, of course, necessary to study the problems of rationalization and its effects on the common interests of humanity. We must also realize that it is impossible to make progress if our efforts are confined within national boundaries. Conditions of competition, for instance, prevent an international industry from raising wages unless a national understanding has been reached. But our understandings must not be merely amongst the nations of Europe, but must reach the countries beyond the Atlantic.

In the present society already there is the type of manual worker who obtains full satisfaction in his task. The supreme expression of labor is the artist. The sculptor takes a block of stone and fashions from it a form of beauty. The union of physical and intellectual effort gives him the joy of creation, and we must discover whether this combination between two elements, the spiritual and the material, cannot bring joy also to the worker in industry. Or again, we find a similar condition in the small farmer who reaps the fruit of his labors, though he does not rationalize his work nor use machines. The results of the peasant's work show that self-directed labor is unusually productive. Any one of us knows the difference between compulsory and

voluntary labor. I must frankly say that when I was myself a metal worker I did not take my eyes from the clock in the workshop, because I was looking forward to the time when I could quit, whilst at present, when I have another kind of pursuit, in which I am free to direct my own work, I watch with apprehension the advance of the hands of the clock - for example, this little sand-clock of our Chairman of Discussion - and I wish there were more than twenty-four hours in the day.

All the experiments in time-study and motion-study have a certain justification, but they are to be looked upon only as external means to an end in a time of transition. What is to be accomplished by motion-study? The worker will have a certain rhythm, but this rhythm in itself is not productive. The worker feels this particularly when he compares himself with the accomplishment of the employer who works all day long. The worker knows that the employer works more, but he often does not know the reason for the difference. Work is not to be accomplished under the pressure of outward force. Nothing really great has ever been achieved in this way. There must be some inner impulse which animates the work and gives joy to the worker in accomplishing his task.

The day will come when we shall regard with curiosity and astonishment our present efforts towards putting some kind of order into the organization of work and its resulting relationships.

We shall then realize that these "Scientific Methods", of which we are today so proud, are but transitory measures between the disorder and misery of the past and the order and harmony of the future. For in reality they do not amount to more than a perfecting of the outer means of calling forth activity. The first of these means was the whip. To-day it is the sum-total of the minute studies with which the preparations for work are being surrounded. But nothing has been changed in the fundamental principle, in our attitude towards life. If we wish to make progress it is this attitude which must change.

We shall then realise that whatsoever has been achieved by human beings which is great, mighty or beautiful has always been accomplished through inner creative forces, never through outer compulsion.

Our task then is to discover these inner forces. And in its fulfilment rational organisation and satisfactory human relations meet. The one seeks harmony in the material order of things, the other harmony in human relationships.

RATIONAL ORGANISATION AS AN ELEMENT IN THE EVOLUTION OF ECONOMIC LIFE

BY H. PAUWELS, GENERAL SECRETARY CONFEDERATION OF CHRISTIAN TRADE UNIONS IN BELGIUM, BRUSSELS.

I am unable, in the short time at my disposal, to enter into the reason for existence, the method of action and the aim of the Trade Union movement, but must instead confine myself to the attitude of the Trade Unions towards rationalisation.

The Trade Unions as a whole constitute to-day one of the constructive elements of economic life. It is therefore reasonable to consider, in the development of economic life and especially in rationalisation, the positive contribution which the Trade Union movement can bring to it.

It is interesting to note that the Trade Unions have all pronounced themselves in favour of more rational and more scientific methods of production. All of them hold the opinion that there is need to economise the forces of production in order to facilitate economic progress.

The Trade Unions, however, in pronouncing themselves in favour of more rational methods of production have not ceased to draw attention to the disadvantages which can result for the workers. Although these disadvantages may be only passing, there is every reason to believe that their duration will be of a sufficient length and their volume of a sufficient size to warrant serious consideration.

In addition, while pronouncing themselves in favour of an organized economic system, such as has been attempted at the Economic Conference at Genoa in 1922 and at Geneva in 1927, the Trade Unions have not ceased to ask for serious measures to be taken to minimise as far as possible the ill-effects of rationalisation. We will return to this point later.

It is impossible for the Trade Unions to be satisfied with an increase of wealth, part of which does not return in an equitable fashion to the workers who contributed towards its creation. It would, in fact, be anti-economic, as well as anti-social, if the mass of workers should continue to find themselves in a position in which their share of industrial revenue does not increase in sufficient proportion as compared with the increased revenue returning to capital. Economic prosperity is, moreover, too intimately bound up with the standard of living of the masses for a more rational division of industrial revenue to be regarded other than as an imperious economic necessity.

The raising of the standard of living of the working class which may be expected to result from rationalisation, can be obtained either through a lowering of prices or through an increase of salaries and wages. It is also highly probable that we shall soon arrive at a reduction in the hours of work.

In looking at the matter from the point of view of economic activity, it may be stated that an increase of wages and salaries is preferable to a reduction in prices, for it is a well-known fact that, in the case of a lowering of prices, the hope of a further diminution brings about a slowing down of business activity leading in its turn to a corresponding decrease in economic activity, while a rise in wages and salaries causes an immediate increase of consumption resulting in a corresponding intensification of productive activity.

In any case the effect of rationalisation should result in a notable improvement in the worker's standard of living, a fact of which the Trade Unions will not fail to make the utmost use.

Another matter with which the Trade Unions are concerned, is that of the concentration of financial power. It cannot be contested that the national revenue has in many countries perceptibly increased while, on the other hand, wealth seems to be much more generally distributed than hitherto. And yet it is a notable fact that financial power has become concentrated in a few hands. The banks have, to-day, a very considerable influence in every country. It is moreover well-known that they do not confine themselves simply to financial activities but that they are increasingly extending their empire over economic activities as well. There is no commercial or industrial undertaking which has had dealings with a bank, which has not been obliged to submit to the condition that the bank be represented on the Board of Directors in order to obtain controlling powers.

The problem of financial concentration comes before us in a manner all the more serious on account of the fact that the great banking institutions have, among others, a very considerable influence on the various wheels of State, thus making it possible for the general well-being to be sacrificed to financial profits.

It is, indeed, still sufficiently difficult at the present time to take account of the consequences of rationalisation as they affect the conditions of life of the worker. We are still without sufficient facts; they are moreover difficult to establish, necessitating very long and very minute research of a distinctly scientific character. The Trade Unions are closely occupied with this matter, but much time is still needed before their researches can give results sufficiently dependable to bear scientific criticism.

Much has been said concerning the psychological aspect of the problem. It is greatly to be feared that through excessive mechanisation in industry, which makes man more and more a cog in the machine, the worker will see himself diminished in dignity and will no longer be concerned, as ought to be the case, with his social, intellectual and moral development, and with the economic and social value of his work.

The Trade Union movement is specially concerned with this question for the very reason that, from its origin, it has been active in developing a consciousness of the dignity of the working class, the development of this sentiment being one of the basic elements in all Trade Union activities.

The Trade Unions look towards an industrial democracy, by which they understand the incorporation of an organized working class in economic, political and social life.

Such an ideal is impossible of realization with a working class which has no consciousness of its dignity, its possibilities and its responsibilities.

The problem of unemployment has been treated from every aspect each time rationalisation is mentioned. The Trade Unions affirm that in rationalised countries unemployment is accentuated in waves corresponding to the development of rationalisation, and that unemployment has therefore not been lessened as the promoters of rationalisation have predicted. In this connection various questions present themselves, notably that of insurance against unemployment, and that of the displacement of the manual

worker - in other words, the workers' migration, both on the continent and overseas.

The Trade Unions are further of opinion that a certain reclassification of professional occupations should be considered. The development of certain industries is such that the amount of manual labour employed is constantly decreasing; the workers thus dispensed with ought to be able to seek elsewhere a sufficiently lucrative position. This problem is all the more pressing in that it is precisely the passing of the manual worker which is one of the chief consequences of rationalisation.

Reference has already been made to the influence of large undertakings and of the concentration of banking on the life of State. It is essential that the State should not allow itself to be submerged, since its principle reason for existence is to safeguard the wellbeing of the community. A way has still to be found by which the State can best guarantee the general welfare against these concentrated institutions. The idea has taken shape, notably in Germany, of an institution for fixing prices; the prices fixed by this institution are maximum prices which may not be exceeded.

A second method is the publicity which should be given to all operations of these giant industrial and banking institutions.

Some control on the part of the State is to be desired and it is not impossible that the day will arrive when the international cartels will have to submit to a certain amount of control by the League of Nations.

On the workers' side, it is becoming increasingly difficult to attempt to enter into any kind of control of these enterprises other than through the channels afforded by the Trade Unions.

Some people, in order to arrive at workers' control, have recommended various ways in which the workers might share in the business, while others have recommended works councils, as in Germany.

In our opinion the best system is still that of direct participation on the part of the Trade Union organizations in economic life and in the joint management of industrial undertakings, this being besides the only organic method. It is permissible to hope that this aim will be fulfilled if the workers are conscious of their responsibility and of the great possibilities capable of realisation inherent in the Trade Union activities themselves.

The I. R. I. has for its chief aim the establishment of human and peaceful relations in industry. The Trade Unions pursue fundamentally the same aim. The Trade Union movement of to-day seeks to obtain industrial peace.

As Trade Unionists, we hope that the I. R. I. will continue its activities with the greatest possible success and that it will realize its programme. But peace is nothing else than "harmony in the order of things" ("la tranquilité dans l'ordre"). It is not possible to say that order reigns if our economic régime is such that the working class does not occupy its rightful place therein, and if no steps are taken to ensure the full development of the worker's intellectual and moral faculties and to give him the economic, political and social authority which is his due.

It is in this spirit that the Trade Unions strive towards the realisation of an economic order which should lead to real economic peace.

We are convinced that the I. R. I. has the same attitude towards these questions.

ÜBERSETZUNGEN

GRUPPEN ALS AUSSCHLAGGEBENDE FAKTOREN DER BEZIEHUNGEN IN DER INDUSTRIE

VON M. L. FLEDDÉRUS,
VIZE-PRÄSIDENTIN DER I. R. I.

Aus dem Programm geht hervor, dass eine kurze Ansprache über "Gruppen als ausschlaggebende Faktoren in der Industrie" die Einführung bildet zum Thema des morgigen Tages: Was ist eine rationell organisierte Industrie? Ich glaube, wir können unsere Verhandlungen garnicht anders beginnen. Die rationell organisierte Industrie ist gewissermassen die eine Hälfte des Kreises - die industriellen Beziehungen die andere Hälfte.

Dass die Beziehungen in der Industrie Beziehungen zwischen Gruppen sind, in viel höherem Masse als Beziehungen zwischen Individuen, ist bezeichnend für die Gegenwart und Weg-deutend für die zukünftige Entwicklung, die in die Richtung noch stärkerer Zusammenbildung von Massen zu weisen scheint.

Die eigentümliche Bedeutung der Gruppenbeziehungen unserer Zeit - im Vergleich zu den Beziehungen von Mensch zu Mensch einer noch garnicht so fernen früheren Periode der Industrie kommt auch zum Ausdruck in den Schlüsselworten der heutigen Wirtschaftsliteratur. Ich habe einige dieser Stichwörter niedergeschrieben, so, wie sie mir gerade in den Sinn kamen *; sie sind uns allen vertraut, aber, es ist vielleicht interessant und anregend, sie im Sinne zu behalten und sie im Laufe der Verhandlungen zu ergänzen. Diese Worte sind bezeichnend für das Leben, das wir bewusst oder unbewusst führen.

Dr. Delisle Burns hat in Cambridge das Thema der Gruppenbildung behandelt; bei Durchblättern des Berichtes zeigt sich jedoch, dass alle Redner die Tatsache der Gruppenbildung irgendwie berührt haben. Einige Vortragende, wie Herr Dr. Myers, Dr. Miles, Major Urwick, haben sie ausdrücklich hervorgehoben. Aber auch in den anderen Referaten taucht die Gruppenidee, wenn auch ungenannt, hinter den Erscheinungen auf.

Ziel des Kongresses in Cambridge war das Streben nach grösserer Klarheit, über die Welt der wirtschaftlichen Dinge, in der wir leben. Was uns nicht klar ist, beunruhigt uns. Sobald wir eine Tatsache oder Entwicklung kennen, können wir ergänzen, hemmen, heilen oder ausgleichen. Halbwissen beunruhigt immer.

Ich glaube, wir befinden uns jetzt in der Industrie in einem Stadium der Halbklarheit. Unsicherheit und Unbehagen werden stärker empfunden in dem Masse wie die Industrie pilzartig um uns her wächst. Dies ist eine allgemeine Entwicklung, deren volle Auswirkung erst allmählich erkennbar wird. Aber wir können, wenn wir wollen, schon jetzt Pionierarbeit leisten, indem wir der Zeit voraus eilen; wir können das Unbehagen eher beseitigen, wenn wir diese Entwicklungstatsachen objektiv untersuchen und uns zu bewussten Vorkämpfern von Reformen machen, die Spannungen lösen und ausgleichend zu wirken vermögen.

Das Gruppenproblem wird in dem Bericht über Cambridge immer wieder hervorgehoben. Wenn aber die Gruppenbildung von solcher Bedeutung

* Schlüsselworte des gegenwärtigen Wirtschaftslebens:
Massenproduktion, Rationalisierung, Normierung, Wechselseitige Abhängigkeit, Wechselwirkung, Kooperation (Zusammenwirken), Führerschaft, Gruppenarbeit, Fliessarbeit, Kartell, Komplex, dynamisch.

für die Industrie ist, so rückt auch gleichzeitig die Frage der Führerschaft in ein neues Licht. Viele bilden die Gruppe, wenige lenken sie.
In Cambridge hat Major Urwick gesagt: "Wir müssen das Problem der Führerschaft neu durchdenken; es ist brennend. Solange wir keine Lösung finden, nützen uns Reformen auf einer höheren Ebene in der Industrie garnichts. Auf die Dauer fallen doch nur die Einzelheiten des täglichen Lebens ins Gewicht. Die Beziehungen in der Industrie werden im Betriebe geschaffen."
Weil wir alle fühlen, dass im Betriebe nicht nur die Kraft erzeugt wird, die Güter schafft, sondern auch die Kraft, die menschliche Beziehungen formt, sind wir zu dieser Aussprache zusammengekommen. Zum ersten Mal seit Vlissingen fühlen wir, dass wir fruchtbare Arbeit tun können. Wir mussten erst miteinander verwachsen und einen gemeinsamen Grund erarbeiten. Das haben wir vor und in Cambridge getan. Wir brauchten auch ein Teleskop, um die wirtschaftliche und soziale Welt um uns her zu erkennen, in der unsere Betriebe Einheiten sind - Glieder eines Organismus. Ohne diesen erweiterten Horizont konnten wir nicht die Wege auffinden, auf denen wir vorwärts gelangen können.
Ich brauche mit dem Verlesen der verschiedenen Stellen über die Gruppen in dem Bericht von Cambridge keine Zeit zu verlieren. In dem gedruckten Programm haben wir nur wenig zitiert und nur auf einige Vorträge hingewiesen. Aber wer in Cambridge war und wer den Verhandlungsbericht gelesen hat, weiss, wie oft im Anschluss an die Ausführungen von Dr. Delisle-Burns auf die "Gruppen" eingegangen worden ist. Es gibt wesentliche Gruppen (wie Arbeiterschaft, Betriebsleitung, Aktionäre) und zahlreiche andere Gruppen, die - wie Dr. Delisle-Burns es ausdrückt - "durch den Druck der gleichen Umstände auf die Gemüter" entstehen.
Auch Dr. Miles äusserte sich in ähnlichem Sinne: "In der Wirtschaft entsteht immer die Tendenz zur Erweiterung der Gruppen. In den Fabriken werden Männer und Frauen durch die gleiche Arbeit vereint; sie machen gleiche Erfahrungen, sie haben mit gleichen Schwierigkeiten zu kämpfen und stehen im gleichen Verhältnis zur Betriebsleitung Und so entwickeln sich auch gleiche Formen der Reaktion." Dr. Miles fährt fort: "Es kann nicht überraschen, dass sich unter den heutigen Wirtschaftsbedingungen, die zu weitgehender Spezialisierung führen, gleichzeitig innerhalb der Wirtschaftsorganisation zahlreiche Gruppen entwickeln."
Dr. Myers findet den Weg zur Gruppe durch das Individuum. "In der Umgebung des einzelnen Menschen leben andere Individuen. Das Studium des Individuums führt daher zur Untersuchung des Einflusses der Gruppen auf das Individuum."

Diese wenigen Zitate geben genügend Anregung zum Nachdenken. So wie der Druck der gleichen Umstände die Gruppe erzeugt, schafft er auch, um im Sinne Dr. Delisle-Burns zu sprechen. "Möglichkeiten für eine Kultur des sozialen Verhaltens ("The opportunity for a very highly developed social attitude"), "eine Möglichkeit, die bisher noch nicht ausgewertet worden ist." Was heisst "Kultur des sozialen Verhaltens"? Dr. Burns hat hierfür keine Erklärung in seinem Vortrag gegeben. Werden wir am Schluss unserer Verhandlungswoche zu einer klaren Auffassung gelangt sein? Ich zweifle nicht, dass das Führertum bei dieser Frage eine Rolle spielen wird.

Eines unserer modernen Schlüsselworte lautet: "Standardisierung" - Normung. Dies ist ein Gruppenbegriff. Er wird meist nur auf das Material angewandt. Ich glaube, wir müssten daneben einem anderen Gruppenbegriff den ihm gebührenden Platz schaffen, nämlich dem Begriff der Norm (standard). Die Industrie bemüht sich intensiv um die Schaffung von Mustertypen von Maschinen und Produkten. Aber sollte sie sich nicht auch bemühen um mustergültige Normen für sinnvolle technische Verfahren, die den menschlichen Organismus berücksichtigen, um sorgfältig durchdachte Lohnmethoden und verfeinerte Normen in der Betriebspädagogik und Arbeitsethik? Und weil wir in der Industrie nicht länger nur die Beziehungen von Mensch zu Mensch, sondern die Beziehungen von Gruppe zu Gruppe haben, könnten dann nicht solche mustergültige Normen - wenn sie von denen geschaffen und erfüllt werden, die den Funken zur Führerschaft in sich tragen - eine wertsteigernde Kraft entfalten? Major Urwick hat, glaube ich, in Cambridge davon gesprochen, als er sagte, dass in Gross-Britannien Arbeitgeber- und Arbeitnehmergruppen hier und da eine erstaunliche Kraft der Gemeinschaftsarbeit und des Zusammengehörigkeitsgefühls aller Glieder eines Betriebes, von der Belegschaft herauf, entwickelt hätten. Er hat weiterhin gesagt: "Die Betriebsleitungen sollten sich dies nicht zugute halten. Dies sei vielmehr die wunderbare Empfänglichkeit der menschlichen Seele für Gruppensolidarität und Gruppenideale - ein noch völlig unbeackertes Feld der Psychologie". Und er fuhr fort: "Hierin liegt ein Hoffnungskorn für den sozialen Fortschritt der Menschheit in der Zukunft. Hier wird eine dynamische Kraft zur Höherentwicklung in unsere Hände gelegt."

Ich glaube, dass diese Kraft umso bedeutungsvoller sein wird, je mehr der Einfluss der Gruppen in der Industrie wächst. Denn die Entwicklung dieser dynamischen Kraft liegt nicht nur bei Unternehmern und Betriebsleitern, sie liegt bei den zufällig gebildeten, und bei den wesentlichen Gruppen. Ihre Entfaltung und Stärke hängt von denen ab, die Normen und Methoden des Zusammenwirkens mit der Arbeiterschaft von Grund auf beherrschen, und in ihrer Gruppe Solidarität und Idealismus zu wecken vermögen.

In der vor uns liegenden Woche wollen wir feststellen, welche Normen und Methoden befriedigende und menschliche Beziehungen in einer wissenschaftlich oder besser rationell organisierten Industrie hervorrufen können. Unsere Aufgabe ist nicht leicht, denn unser Wissen über die rationelle Organisation der Industrie ist lückenhaft. Wir können uns nicht auf die Erfahrungen der Vergangenheit und nur zum Teil auf die Gegenwart stützen. Wir müssen die Zukunft gewissermassen in die Gegenwart hinunter bitten.

Das ist die Aufgabe, die wir uns gestellt haben, und jeder von uns muss daran mitarbeiten. Im gemeinsamen Denken liegen schöpferische Kräfte. Wir müssen zuweilen auf eine Bergspitze steigen, von der wir das Land um uns her überschauen können - dann kann jeder von uns wieder in sein Heimattal zurückkehren und zielsicherer, überlegter und verständnisvoller arbeiten.

RATIONELLE ORGANISATION

VON L. URWICK, O.B.E., M.C., M.A., DIREKTOR DES INTERNATIONALEN RATIONALISIERUNGS-INSTITUTS IN GENF.

Das Wort "Rationalisierung" ist von einer so massgeblichen Stelle wie der Welt-Wirtschafts-Konferenz vom Jahre 1927 definiert worden. An dieser Konferenz nahmen Vertreter der Arbeitgeber, der Arbeitnehmer und Nationalökonomen aus nahezu allen Ländern teil. Der Unterausschuss für Industrie verwandte, gestützt auf umfangreiche Vorarbeiten, einen erheblichen Teil seiner Zeit darauf, gerade auf diese Frage. Zum Schluss seiner Untersuchungen wurden als endgültige Ergebnisse eine Reihe von Resolutionen vorgelegt, die folgendermassen lauteten: "Unter Rationalisierung verstehen wir diejenigen technischen und organisatorischen Methoden, die auf Sicherung der geringsten Vergeudung von Material und Kraft zielen... Rationalisierung umfasst: Organisation der Arbeit nach wissenschaftlichen Grundsätzen, Normierung von Material und Produkten, Vereinfachung der Verfahren und Verbesserungen im Transport- und Absatzwesen".

Das Reichskuratorium für Wirtschaftlichkeit, das als offizielle Zentralstelle in Deutschland mit der Erforschung der Rationalisierungsprobleme beauftragt ist, hat bereits eine Definition mit folgendem Wortlaut veröffentlicht: "Erfassung und Anwendung aller Mittel, die Technik und planmässige Ordnung zur Hebung der Wirtschaftlichkeit bieten mit dem Ziel, den Volkswohlstand durch Verbilligung, Vermehrung und Verbesserung der Güter zu steigern. Sie erfordert gemeinsame Arbeit aller Klassen der Gesellschaft." Es ist bemerkenswert, dass diese Definition der Begriffserklärung der Weltwirtschafts-Konferenz sehr nahe kommt.

Sowohl die Weltwirtschafts-Konferenz wie das Reichskuratorium sehen das Ziel der Rationalisierung einerseits in der Sicherung der "Mindestvergeudung von Kraft und Material" und andererseits in der Erhöhung der Lebenshaltung durch "Verbilligung, Vermehrung und Verbesserung" der Güter. Ich glaube, dass viele, die über die Rationalisierung urteilen, ihre Bedeutung nicht erfassen, weil sie über der Erörterung der Methoden die letzten Zielsetzungen aus dem Auge verlieren. Die Anerkennung dieser Ziele durch die Weltwirtschafts-Konferenz bezeichnet einen radikalen Umschwung in unserem wirtschaftlichen Denken. In einem späteren Stadium der Tagung stellte die Konferenz in ihren Beschlüssen fest "man erwartet von der Rationalisierung für die Gesellschaft Gewähr für eine grössere Stabilität und eine höhere Lebenshaltung". Diese Erklärung enthält das deutliche Zugeständnis, dass das Ziel der Wirtschaft jenseits des privatgeschäftlichen Gewinninteresses liegt. Zweck unseres wirtschaftlichen Mechanismus ist nicht die Bereicherung des Einzelnen - dies ist vielmehr eine Nebenerscheinung - sondern der Dienst für die Allgemeinheit. Ich möchte Ihnen aus diesem Grunde vorschlagen, in jeder Definition des Begriffs der rationell organisierten Industrie an erster Stelle eine klar umrissene Feststellung dieses Ziels zu geben, etwa in folgender Form: Eine wissenschaftlich organisierte Industrie besteht aus einer Gruppe von Unternehmungen, die der Befriedigung ähnlicher oder verwandter Bedürfnisse im Interesse der Allgemeinheit dienen mit Methoden, die die Kraft- und Energievergeudung auf ein Minimum herabsetzen.

Ich brauche wohl kaum zu betonen, dass es eine geistige Revolution bedeutet - um einen Lieblingsausdruck F. W. Taylor's über die wissenschaft-

liche Betriebsführung zu gebrauchen - wenn offen zugestanden wird, dass unserer Wirtschaftsstruktur ein sozialer Zweck zugrunde liegt. Bis jetzt wurde die Weltwirtschaft noch beherrscht von Auffassungen, die uns aus der Periode des Handwerks überkommen sind, und die den veränderten technischen, durch die Anwendung der Maschine entstandenen Bedingungen in keiner Weise Rechnung tragen. Es besteht immer ein Abstand zwischen der gesellschaftlich entwickelten Technik und der Anpassung der sozialen Ideen an die durch die Technik hervorgerufenen neuen Bedingungen.

Eine von der Maschine und von der Idee der Arbeitsteilung beherrschte Produktionsweise erfordert eine Verfeinerung der Zusammenarbeit, die für eine handwerkliche, auf den lokalen Markt beschränkte Wirtschaft ganz überflüssig ist. Die gebieterische Notwendigkeit der Zusammenarbeit erstreckt sich über die einzelne Fabrik hinaus auf die Märkte und Länder der ganzen zivilisierten Welt. Ich brauche meine Zuhörer nicht erst auf die innige Verflechtung der Kräfte hinzuweisen, die stattfinden muss, damit ein Pfund Tee in einem New Yorker Warenhaus oder ein bedrucktes Kleid in Kalkutta verkauft werden kann. Es ist erstaunlich, dass wir solange geglaubt haben, dieses feine Netzwerk wechselseitiger Leistungen könne durch den Hinweis auf eine Theorie reguliert werden, die auf eine einfache Formel gebracht, etwa lauten würde: "Jeder für sich, und den Letzten hole der Teufel".

Ich glaube, dass spätere Generationen bei der Rückschau auf unsere Zeit eine der merkwürdigsten Erscheinungen der menschlichen Geistesgeschichte darin erblicken werden, dass die industrialisierte westliche Kulturwelt während des 19. Jahrhunderts jedes Verantwortungsgefühl für die empfindliche Struktur ihres Wirtschaftslebens aus ihrem Denken ausgeschaltet hatte. So wie unsere Vorfahren die Auswirkung einer ihnen unerklärlichen Kraft dem Eingriff einer "Gottheit" zuschrieben, so hat die Geschäftswelt bis zum heutigen Tage die Regulierung des gesamten wirtschaftlichen Lebens dem angeblich segensreichen Walten einer "Gottheit" überlassen, die sie die Konkurrenz nennt. Ich glaube, dass der zukünftige Beschauer, der mit Verwunderung auf unsere "animistische" Deutung der wirtschaftlichen Tatsachen herabblicken wird, doch in der Weltwirtschafts-Konferenz von 1927 die Dämmerung einer neuen Zeit erkennen wird. Er wird feststellen, dass die Führer der Weltmeinung in diesen Fragen zum ersten Mal - wenn auch tastend und unklar - die Möglichkeit einer bewussten Kontrolle der Gesellschaft über ihren Wirtschaftsapparat und dessen planmässige und endgültige Einstellung in den Dienst der Allgemeinheit erwogen haben .

Ich glaube ferner, dass dem zukünftigen Beschauer, wenn er unseren Gedankengängen folgt, ein Punkt besonders auffallen wird. Er wird finden, dass eine Lösung der Schwierigkeiten und Verwicklungen des Wirtschaftslebens, die das 19. Jahrhundert vor der Uebernahme jeder Verantwortung und Kontrolle zurückschrecken liessen, durch den Geist der Technik bewirkt wurde, die den materiellen Fortschritt - die Wurzel jener Schwierigkeiten - erst ermöglicht hatte.

Wenn wir nun zur Methode zurückkehren, so stellen wir fest, dass das Reichskuratorium von Technik und planmässiger Ordnung spricht. Die Weltwirtschafts-Konferenz hat eine Liste von Bestrebungen aufgestellt, die teils auf naturwissenschaftlichen und technischen Entdeckungen beruhen, teils auf der Anwendung durchdachter Methoden, die von Vertretern dieser Wissenschaften zur Ueberwindung der Schwierigkeiten erarbeitet

worden sind, die sich ihrer Nutzbarmachung für das praktische Leben entgegenstellen.

Wenn wir die Dinge so betrachten, wird die Beziehung zwischen Rationalisierung und wissenschaftlicher Betriebsführung klar. Auf dem Gebiet der Leitung von industriellen Einzelbetrieben wandte F. W. Taylor zuerst wissenschaftlich durchdachte Methoden an. Aber die Rationalisierung wendet diese Methoden im Rahmen der bestehenden wirtschaftlichen Organisationen nicht nur auf Probleme der Industrieverwaltung an, sondern auf das nationale oder internationale Zusammenwirken aller wirtschaftlichen Kräfte der Welt zum Zweck der Lösung der Probleme der Produktion, der Konsumption und der Verteilung. Kurz, zum Wiederaufbau des wirtschaftlichen Lebens im Ganzen.

Wer sich mit der Rationalisierungsfrage ernsthaft beschäftigt hat, wird offen zugeben, wie viel er der Bewegung für wissenschaftliche Betriebsführung zu danken hat. Er führt nur auf höherer Stufe jene "geistige Revolution" herbei, von der F. W. Taylor gesprochen hat. Es hätte wenig praktischen Wert, Zeit mit der genauen Feststellung der Grenzen der wissenschaftlichen Betriebsführung zu verbringen. Sie ging der grösseren und allgemeineren Geistesströmung voraus, die wir "Rationalisierung" nennen. Sie leistete dafür wesentliche Vorarbeit. Solange diese Leistung anerkannt wird, hat es wenig Zweck, dass Persönlichkeiten, deren grundlegende Theorien so oder so bezeichnet werden, mit Auseinandersetzungen über Abgrenzungsfragen Zeit verlieren.

Wenn wir uns die Aanalyse des Inhalts der auf der Weltwirtschafts-Konferenz angenommenen Resolution zu eigen machen, so folgt, dass Rationalisierung eine Haltung und eine Vollzugsmethode ist. Als Haltung gründet sie sich auf die Ueberzeugung, dass eine rationelle Kontrolle über das Wirtschaftsleben der Welt im Wege der Anwendung wirtschaftswissenschaftlicher Methoden möglich und wünschenswert ist. Als Vollzugsmethode fordert sie Anwendung der Technik und systematische Ordnung auf alle Probleme, die sich aus der Organisation und dem Ablauf der Produktion, der Verteilung und des Verbrauchs ergeben.

Da diese vertiefte Anschauung, die wir Rationalisierung nennen, sich in Europa erst seit einigen Jahren, und in Amerika erst seit 1921 entwickelt hat, so folgt, dass wir jetzt kaum auf praktische und abgeschlossene Erfahrungen über rationell oder nach wissenschaftlichen Grundsätzen organisierte Industrien verweisen können. Die Zeit ist dafür noch nicht reif.

Es gibt auch in der ganzen Welt noch keine einzige Fabrik, von der wir sagen könnten, dass sie bis ins kleinste rationell geführt sei. Wenn wir ganze Industrien betrachten, so ist das Gebiet viel weiter und Einwirkungen daher viel schwerer zugänglich und meistens kann die mit der rationellen Organisation verbundene erzieherische Arbeit nicht durch bezahlte Angestellte geleistet werden, sondern verlangt die Mitwirkung unabhängiger Unternehmerpersönlichkeiten.

Hieraus folgt, dass alle Bemühungen, den Begriff "wissenschaftlich organisierte Industrie" oder, wenn ich eine Abwandlung vorschlagen darf "rationalisierte Industrie" zu definieren oder darzustellen, über ein Flickwerk von Teilexperimenten und unvollkommenen oder lauen Versuchen nicht hinauskommen können.

Solche Versuche werden in der ganzen Welt vorgenommen. Wahrscheinlich hat sich noch niemals eine so plötzliche Umwälzung des menschlichen Denkens über wirtschaftliche Vorgänge und deren Rückwirkung auf das soziale Leben vollzogen, wie im letzten Jahrzehnt. Wir haben ein ganzes Jahrhundert dazu gebraucht, um die technischen Probleme, die mit der Einführung der Maschine verbunden waren, zu lösen. Und ich wage zu behaupten, dass die Welt wahrscheinlich ein weiteres Jahrhundert brauchen wird, um mit den gewaltigen Wirkungen fertig zu werden, die die Anwendung der Grundsätze einer wissenschaftlich fundierten Technik und planmässigen Ordnung auf das Leben des Einzelnen und die sozialen Beziehungen ausüben werden.

Erst jetzt fängt der einfache Mann an, sich sein Radio und sein Auto anzuschaffen und übt sich gewohnheitsmässig und so wie es das tägliche Leben verlangt, klug und sachlich in technischen Dingen zu denken. Er lernt z.B., dass bei einer Panne seines Ford-Wagens ein Fusstritt in den Kühler gewöhnlich nicht viel Zweck hat, obgleich solch ein Mechanismus manchmal einen tüchtigen Stoss braucht. Aber in den Beziehungen zu seinen Mitmenschen ist er noch oft recht unvernünftig. Er reagiert gefühlsmässig und instinktiv, statt zu prüfen und zu überlegen. Es wird einige Generationen dauern, bis die Arbeiterführer so weit geschult sind, dass sie schwierige menschliche Situationen mit dem, wie ich es einmal nennen möchte, "sicheren Können des Ingenieurs" meistern. Und es wird unvermeidlich noch lange dauern, bis sich die Wirkung einer solchen Schulung in den Köpfen der ihnen unterstellten Arbeitnehmer gleichfalls in entsprechende höhere Einsichten umsetzt. Eine im wahren Sinne rationalisierte Wirtschaft kann nur von Menschen geleitet werden, die sich selbst zu rationellem Handeln erzogen haben.

Vielleicht wäre es aber doch ganz nützlich, wenn ich in der mir noch zur Verfügung stehenden Zeit versuchen würde, zu zeigen, wie wir aus den uns schon bekannten Teilexperimenten das Bild einer rationell organisierten Wirtschaft der Zukunft aufbauen können. Ein solcher Versuch muss zum Teil Phantasiegebilde sein und gehört in das Bereich der bei den Praktikern so unbeliebten Theorien.

Nun wird aber eine wesentliche Wandlung in der Mentalität der Führer unseres Wirtschaftslebens - wenn wir je das Ideal einer organisierten Gesellschaft verwirklichen wollen - in der Ablehnung der irrigen Antithese von Theorie und Praxis zum Ausdruck kommen. Eine der Hauptlehren, die uns die bisherigen Versuche mit der wissenschaftlichen Betriebsführung gegeben haben, geht dahin, dass sich die Kunst, grosse Gruppen von Menschen zu leiten und zu organisieren, auf geistige Forschungsarbeit in den einschlägigen, grundlegenden Wissenschaften stützen muss, und dass sie jener Gestaltungskraft bedarf, die wahres Können von blosser akademischer Gewandtheit unterscheidet. Bis zu einem gewissen Grade ist dies schon von Persönlichkeiten begriffen worden, die sich mit dem Studium der modernen Betriebsführung praktisch befasst haben. Ich habe in den letzten Jahren in amerikanischen Zeitschriften Aussprüche gefunden wie: "Die führenden Geschäftsleute, die so völlig ahnungslos sind, dass sie sich mit Vorliebe als Praktiker zu bezeichnen pflegen", oder "Praxis ist Statik, Theorie is Dynamik. Alle Reformen, alle Fortschritte beruhen auf der Einbildungskraft des Einzelnen, der eine neue Verbindung von Kräften schafft oder einen neuen Weg zur Lösung einer alten Aufgabe findet; die Einbildungskraft baut eine neue Theorie auf."

RATIONELLE ORGANISATION

Dies zur Entschuldigung dafür, dass ich zu Ihnen über etwas spreche, was unter den obwaltenden Umständen vorerst noch der "Traum einer Wirtschaft" ist.

Wir haben uns darüber geeinigt, dass der Zweck der Wirtschaft die Versorgung der Gesellschaft mit Gütern oder Leistungen ist, und zwar mit einem Mindestaufwand von Material und Kraft, und wir müssen uns nun zuerst und besonders in diesem Kreise über die grundlegenden Beziehungen derjenigen klar werden, in deren Händen die Verwaltung der Wirtschaft liegt. In der neuen Ausgabe von G. D. H. Cole's "Lohnzahlung" (Payment of Wages) ist ein Kapitel über wissenschaftliche Betriebsführung enthalten. Er sagt dort: "Wenn wissenschaftliche Betriebsführung überhaupt eine Doktrin ist, so gründet sie sich auf den Glauben, dass die industrielle Organisation eine exakte Wissenschaft ist, und dass in den Fabriken die Herrschaft der Naturgesetze an die Stelle von Zwang und Urteil treten wird... Diese Anschauung bekämpfe ich. Ich halte daran fest, dass kein Bereich menschlichen Handelns oder Verhaltens in eine exakte Wissenschaft eingespannt werden kann. Ich halte daran fest, dass politische Selbstverwaltung gut ist, nicht nur, weil sie die Leistungsfähigkeit fördert, sondern eben weil sie Selbstverwaltung ist, und ich bin überzeugt, dass auf jedem Gebiet menschlichen Handelns Selbstverwaltung an sich gut ist, denn das Höchste, was der Mensch vollbringen kann, ist Selbstbeherrschung".

In dem Vorhergesagten zeigt sich offensichtlich ein Grundunterschied der Auffassung zwischen demokratischen Geistern und solchen, die eine auf wissenschaftlicher Grundlage organisierte Industrie wünschen. Ich bin der Auffassung, dass dies nur scheinbare Gegensätze sind, die mehr in den Worten als in den Tatsachen liegen. Wenn wir sagten, dass der Begriff der rationell geleiteten Industrie ein Minimum an Material- oder Kraftvergeudung einschliesst, so verstehen wir unter Vergeudung auch die geistig-seelischen Schäden, die den Menschen aus gewissen Organisationsformen erwachsen. Nehmen wir Mr. Coles Behauptung auf, dass politische Selbstverwaltung gut ist, eben weil sie Selbstverwaltung ist. Das ändert nichts an der Tatsache, dass wir das Ideal einer Selbstverwaltung anstreben, die nicht von unklaren Gefühlen und Instinkten getrieben, sondern im Licht einer umfassenden und geordneten Erkenntnis des eigenen Wesens - einer Erkenntnis, die auch jedem Einzelnen zuteil werden kann - geführt wird. In dem gleichen Zusammenhang sagt Cole: "Die Demokraten haben bestritten, dass Fachkönnen und Wissenschaft in der Regierung vertreten sein müssen, dass jedoch das soziale Leben nicht Sache der abstrakten Wissenschaft, sondern des positiven Willens sei". Ich muss gestehen, dass ich nicht ganz mit Cole's Adjektiven einverstanden bin. Es ist gar nicht gesagt, dass die Wissenschaft immer abstrakt sein muss, und der Wille der Regierten ist auch nicht etwas unwandelbar Positives. Im gegenwärtigen Stadium unserer Zivilisation hat er sogar die unliebsame Neigung, rein negativ zu sein.

Aber der Hauptpunkt, an dem Cole meines Erachtens fehl geht, ist, abgesehen von der Frage, ob der Einzelne in der Lage ist, das Problem selbst bis zu Ende durchzudenken, die Tatsache, dass die Formen, in denen die Selbstverwaltung gestalteten Ausdruck finden soll, selbst Gegenstand eines von wissenschaftlichem Geiste getragenen Studiums bilden müssen, wenn man zu befriedigenden praktischen Ergebnissen gelangen will. Es wird

natürlich von jedem, der sich ernsthaft mit wissenschaftlicher Betriebsführung befasst, zugegeben, dass die Physiologie und die Psychologie uns in ihren gegenwärtigen Entwicklungsstadien noch keine zuverlässigen Wegweiser durch die menschlichen Verhaltungsweisen zur Verfügung gestellt haben. - Auf einigen Gebieten können sie dem Staatsmann oder dem Verwaltungsbeamten gewisse Informationen an die Hand geben, die höchstwahrscheinlich viel zutreffender sind, als die Ansichten, die er sich etwa auf Grund seiner eigenen begrenzten persönlichen Erfahrungen bildet; aber es muss noch viel Wasser den Berg hinunterfliessen, ehe ihre Ergebnisse als ausreichende Grundlage für die praktische Behandlung soziologischer Fragen betrachtet werden dürfen.

Aber dies ändert nichts an der Tatsache, dass der Staatsmann und der Verwaltungsbeamte, die solche Fragen in Angriff nehmen, die ihnen bewusst gewordenen Grenzen der "menschlichen Urteilskraft" (ein Ausdruck, den ich Mr. Cole's "positiven Willen" vorziehe) erweitern, indem sie sich die Objektivität und die Technik des wissenschaftlichen Arbeiters zu eigen machen. Ein ausgezeichnetes Beispiel bietet die Analogie, die Cole zum Ausgangspunkt nimmt, wenn er über die wissenschaftliche Betriebsführung in der Industrie spricht und vergleichsweise die Stellung des Fachmanns in der politischen Selbstverwaltung heranzieht. Wir stehen noch im Anfang der vergleichenden Studien über analoge Probleme in verschiedenen Sphären der menschlichen Organisationsarbeit. Aber ohne Zweifel harrt noch ein ungeheures Erfahrungsmaterial über diese besondere Frage der Auswertung. Offenbar kann ein Ausgleich hergestellt werden zwischen dem Vorteil, den die Leistung des Fachmanns in irgend einer Angelegenheit zu bieten vermag und dem Nachteil, der entsteht, wenn den anderen Gliedern des Organismus, die für diese besondere Angelegenheit nicht sachverständig sind, zuviel von ihrer Initiative genommen wird. Soweit wir jetzt beurteilen können, ist die Entwicklung unserer Zivilisation ausgerichtet auf fortschreitende Arbeitsteilung und auf Verfeinerung der funktionellen Wechselbeziehung, durch die die Sachverständigen wiederum in der Arbeit für ein gemeinsames Ziel vereinigt werden können.

Ein deutliches Beispiel für die systematische Arbeit auf dem Gebiet, an das ich denke, bietet das berühmte Kapitel, in dem die Webbs die Erfahrungen der britischen Gewerkschaften über die Beziehung zwischen den Mitgliedern und den Funktionären behandeln. Sie zeigen, wie Schritt für Schritt die grundlegende demokratische Forderung, dass jeder Funktionär periodischen und direkten öffentlichen Wahlen zu unterwerfen ist, der Logik der Ereignisse weichen muss. Praktisch hat das System versagt, weil es zum Teil zu unerträglichen Anstellungsbedingungen für die als bezahlte Diener der Gewerkschaften angesehenen Funktionäre führte. Ferner verbreitete sich in zunehmendem Masse die Einsicht, dass ständige Verwaltungsbeamte nicht von solchen direkten Wahlen abhängig sein, sondern besser von einem, durch öffentliche Wahlen einzusetzenden Verwaltungskörper mittelbar ernannt werden sollten.

Ich möchte darauf hinweisen, dass zu dieser grundlegenden Frage der Beteiligung der Arbeiterschaft an der Kontrolle der Industrie, die Verwaltungslehre und die vergleichende Organisationskunde in Zukunft viel zu sagen haben werden. Es ist unmöglich, sich vorzustellen, dass grosse Massen von Menschen erfolgreich im Dienste der Produktion zusammengefasst werden können, solange Verwaltungsformen bestehen, die ihr Gerechtigkeitsgefühl verletzen. Wenn die Industrie-Belegschaften der Zukunft

fühlen, dass sie als Einzelwesen und als vernünftige Staatsbürger an der Verwaltung der Industrie, in der sie tätig sind, beteiligt sein müssen, so wird es darauf ankommen, ihnen auch einen Anteil an der Verwaltungskontrolle einzuräumen, oder es wird viel unnützen Kräfteverbrauch im psychologischen Sinne geben, und die Industrie wird unserer früher angegebenen Zweckbestimmung nicht entsprechen.

Aber andererseits werden die Formen, in denen eine solche Beteiligung an der Verwaltung zum Ausdruck kommt, werden die Mechanismen und die Beziehungen zwischen den an der Verwaltung beteiligten Arbeitern, den Verwaltungsbeamten und den verschiedenen Gruppen von Sachverständigen zweifellos in weitgehendem Masse bestimmt werden, durch eine objektive und vergleichende Forschung über die verschiedenen Versuche und Erfahrungen in der Industrie und auf zahlreichen anderen Gebieten der menschlichen Tätigkeit.

Ich stimme vollständig mit Cole darin überein, dass Selbstverwaltung an sich etwas Gutes ist. Aber ich glaube, sie ist gut, weil sie den sichersten und schnellsten Weg bietet, um die Industrie-Mannschaften zu systematischem Denken zu erziehen. Nur wenn Menschen die Verantwortung für eine Handlung mittragen, geraten sie in unmittelbare Beziehung zu den Folgen dieser Handlung . So bildet die Selbstverwaltung das ABC systematischer Schulung, weil sie Ursache und Wirkung unmittelbar miteinander verknüpft, und die Handelnden der harten Disziplin der Tatsachen unterstellt. Es gibt keinen Gegensatz zwischen einer rationell organisierten Wirtschaft und einer Wirtschaft, die die Selbstverwaltung der beteiligten Arbeiter in weitgehendem Masse ausgebildet hat, vorausgesetzt, dass der Mechanismus, durch den die Selbstverwaltung verwirklicht und zum Ausdruck gebracht wird, selbst Gegenstand systematischer Forschungsarbeit ist.

Die Bedingung, die unter allen Umständen zuerst erfüllt werden muss, ist die Verhütung von Kraftvergeudung, und zwar auch im psychologischen Sinne, d.h. Kraftvergeudung, die durch sinnlose und törichte Reibungen mit den Persönlichkeiten entsteht, die zu leiten und zu verwalten haben. Durch Beobachtung ist jüngst festgestellt worden, dass der Wirtschaftsapparat der Moskauer Regierung der langsamste und schwerfälligste der ganzen Welt ist. Der Zweck wirtschaftlicher Tätigkeit ist die Produktion von Gütern und von Leistungen zu den geringsten Kosten für die Allgemeinheit, nicht aber die Produktion von Debattieranstalten auf Kosten der Allgemeinheit.

Wenn wir uns dem zweiten grossen Partner im Wirtschaftsprozess, dem Kapital zuwenden, so finden wir bereits eine anormale Situation. Theoretisch und in weitem Masse auch rechtlich liegt die Kontrolle über eine Industrie in den Händen derjenigen, die das Kapital für ihren Ausbau zur Verfügung gestellt haben. In der Praxis liegt der Fall ganz anders. Nominell übt in den Industrieländern der Aktionär unter dem Rechtsinstitut der beschränkten Haftung die Aufsicht aus durch das Recht, die Direktoren zu ernennen und zu entlassen, und durch die Gelegenheit zur Kritik an bestimmten Terminen. Aber tatsächlich hat eine Reihe von Umständen dazu beigetragen, jede irgendwie wirksame Ausübung dieses Rechtes auszuschalten. In steigendem Masse wird industrielles Kapital in Form von ersten Sicherheiten (prior charge securities) aufgenommen, von denen Aufsichtsrechte ausdrücklich ausgeschlossen sind. Die Informationen, die

den Aktionären erteilt werden, sind in der Mehrheit der Fälle viel zu dürftig, um eine irgendwie wirksame Kritik zu gestatten und hinken so hinter den Ereignissen her, dass dem Aktionär keine Möglichkeit des Eingriffs bleibt. Die Praxis der Errichtung von Beteiligungsgesellschaften ("holding companies) und ähnlichen Verschachtelungen von Aktienbesitz kompliziert die Dinge so, dass eine fruchtbare Diskussion für einen Aussenstehenden ganz unmöglich wird. Bei der Wahl der Direktoren oder Administratoren (administrators) bleibt selten etwas anderes übrig als die Vorschläge der herrschenden Gruppe anzunehmen.

Der Aktionär hat seinerseits die Entwicklung gefördert, die ihn um die ihm theoretisch zustehenden Kontrollrechte gebracht hat. Er zeigt sich immer mehr bereit, sich mit einer Sicherheit zufrieden zu geben, die ihm eine feste, und vor allem steigende Rente bietet, wenn auch die zuzügliche angebliche "erste Sicherheit" recht illusorisch sein mag. Dies allein beweist schon, dass es ihm mehr darauf ankommt, sein Kapital zu verzinsen, als sich an einer aktuellen industriellen Unternehmung zu beteiligen. Wenn er mehr Neigung zum Spekulieren hat, so wird er höchst wahrscheinlich seine Aktien um jeden Preis auf dem Markt verkaufen, anstatt sich die Mühe zu machen, seine Kontrollrechte da auszuüben, wo die Dinge, wie es vermutet, schief gehen. Schliesslich hat die Ausdehnung der Investment-Trusts in den letzten Jahren einen weiteren Weg geschaffen, auf dem sich der Durchschnitts-Aktionär des kärglichen Restes von Verantwortung, die ihm noch für die Kontrolle geblieben ist, entledigt.

Es wird sich zeigen, dass die Forderung der Sozialisten - die Industriearbeiter einschliesslich der Direktoren müssten das Kapital mieten, statt dass das Kapital sie mietet - in der Praxis zum Teil schon verwirklicht worden ist. Es wird meiner Ansicht nach unvermeidbar dahin kommen, dass die auf betriebswissenschaftlicher Grundlage organisierte Industrie diese Tatsache in Zukunft in der Theorie und in der Gesetzgebung wie in der Praxis anerkennt, und dass die Funktionen der Kapitalbeschaffung und der Kapitalkontrolle geteilt werden. Kapital wird, wie irgend eine andere Sache, gemietet werden können, aber das Kapital wird daraus kein abstraktes Kontrollrecht und nur in Ausnahmefällen ein Vorzugsrecht auf Ueberschüsse, die über den normalen börsenmässigen Zinsfuss hinausgehen, herleiten können.

Diese Ausnahmefälle werden nur bei Unternehmungen vorkommen, die jung oder sehr spekulativ sind und von denen aussergewöhnliche Prämien angeboten werden müssen, um Kapital zur Uebernahme des aussergewöhnlichen Risikos anzuziehen. Aber wohlverstanden, diese aussergewöhnlichen Prämien beruhen nicht auf der traditionellen Anschauung, dass das Kapital ein Recht auf den Ueberschuss hat, sondern auf Grund einer wissenschaftlichen Berechnung des Anreizes, der geschaffen werden muss, um die erforderlichen Summen unter Berücksichtigung des im einzelnen Falle einzugehenden Risikos anzulocken.

Diese Darlegung der Kapitalverhältnisse und der Beteiligung an der Kapitalkontrolle führt uns zu einer anderen Frage. Wenn es stimmt, dass das in der Industrie investierte Kapital keine wirksame Industriekontrolle ausübt, so ergeben sich zwei neue Punkte.

Erstens: wer führt die Aufsicht über die Industrie? Unzweifelhaft geht das legale Recht, grundlegende Entscheidungen in Verwaltungsfragen zu

treffen, mehr und mehr auf kleine Gruppen von Finanzleuten (financier entrepreneurs) über, die die doppelte, besondere Begabung besitzen: eine Ueberzeugungskraft, die das Publikum bestimmt, ihnen seine Gelder anzuvertrauen und eine ungewöhnliche Erfahrung oder eine besonders glückliche Hand in der Anlage von Mitteln in produktiven Unternehmungen, die befriedigende Gewinne abwerfen. Fraglos erfüllen diese Persönlichkeiten oft eine ungemein nützliche Aufgabe innerhalb der Wirtschaftsgemeinschaft: sie lenken den Geldstrom in ertragreiche Kanäle und üben eine Kritik an der Produktionsleitung aus, die oft heilsam ist. Andererseits hat dieses System auch schädigende Wirkung: die Nachfrage des Publikums nach schnellen Gewinnchancen entspricht nicht immer den längeren Bedarfsperioden der Wirtschaft, wobei die Zweige oder die Konzerne, die den dringendsten Kapitalsbedarf für Betriebsmittel und Reorganisationszwecke haben, die am wenigsten günstigen Aussichten für schnelle Gewinne bieten. Zweitens verschiebt die überwiegende Beschäftigung des Finanzdirektors mit der ihn am stärksten interessierenden Gewinnkraft des Unternehmens an dem er interessiert ist, das Schwergewicht zu sehr auf die finanzielle Seite, zum Nachteil einer Politik auf weite Sicht, die die Organisation und Verwaltung des Unternehmens in Beziehung zu seiner Leistungsfähigkeit setzt. Unbefugte, formlose Kritik durch den Kapitalgeber oder den Aktionär ist nach Auslieferung seiner Aufsichtsbefugnisse ausgeschlossen, und da sich die Gruppe der Finanzadministratoren praktisch selbst wählt, und sich selbst im Amt erhält, so fehlt jede Art von Kritik so gut wie ganz.

Als zweiten wichtigen Punkt möchte ich Folgendes hervorheben: Wenn es stimmt, dass die Kritik- und Kontrollmöglichkeit des Aktionärs völlig verkümmert ist, darf dann auf Grund sorgfältiger Analyse gefolgert werden, dass diese Funktion überflüssig ist, oder dass die Formen, in denen sie ausgeübt wird, unzureichend sind? Ich glaube, dass eine objektive Untersuchung der wirtschaftlichen Tatsachen und mehr noch eine vergleichende Studie anderer Organisationen zu dem endgültigen Ergebnis gelangen würde, dass die Aufgabe der Kritik und der Revision einen wünschenswerten Bestandteil jedes gesunden Verwaltungsaufbaues bilden. Wenn dies zutrifft, und wenn der Aktionär unfähig und nicht gewillt ist, diese Aufgabe auszuüben, so folgt daraus, dass sie in einer rationell organisierten Industrie einer anderen Stelle übertragen oder jedenfalls in anderer Weise gehandhabt werden muss.

Zusammenfassend möchte ich über diesen Teil des Traumbildes sagen: Die rationell geleitete Wirtschaft der Zukunft wird

notwendigerweise die Arbeiterschaft in erheblichem Masse an der Kontrolle beteiligen, doch so, dass der Apparat und die Formen der Kontrolle den Zwecken einer paritätischen Verwaltung entsprechen und nicht politischen Vorurteilen nutzbar gemacht werden;

das für die Finanzierung ihrer Unternehmung notwendige Kapital unabhängig von irgend welcher Kontrollmacht aufnehmen, abgesehen von dem Fall aussergewöhnlich spekulativer oder junger Unternehmungen;

die wichtigen, dem Aktionär überlassenen Funktionen der Kritik und Prüfung der Verwaltung, die zusammengeschrumpft sind, durch andere für diesen Zweck bestimmte Mechanismen ersetzen;

sich in der Frage der Lenkung und des Zustromes von Kapital bis zu einem gewissen Grad einer zentralen Leitung oder wenigstens einer

zentralen Einwirkung auf nationaler oder internationaler Basis unterziehen.

Ich möchte betonen, dass dieses "Zukunftsprojekt" kein Versuch ist, Politik zu machen. Ich urteile nicht, ob diese Einrichtungen gut oder schlecht für das Wirtschaftsleben sein werden. Wir wissen meines Erachtens noch nicht genug, um schon über die Ergebnisse urteilen zu können. Ich deute nur darauf hin, dass eine objektive Untersuchung des vorhandenen Materials unter dem Gesichtspunkt der geringsten Vergeudung in eine gewisse Richtung weist. Ich habe meine Darlegung einen "Traum" genannt, aber der Traum stützt sich auf Bausteine der Wirklichkeit aus verschiedenen Bereichen der Geschäftswelt. Die Kontrolle der Arbeiterschaft (Workers Control) ist lange ein entferntes Ziel der Gewerkschaftspolitik in verschiedenen Ländern gewesen. Aber Erfahrungen in Russland und in Italien beweisen ebenso wie die realistischen Tendenzen des Sozialismus, auf die ich hingewiesen habe, dass ihre Anwendung und Rückwirkung auf die Leistungsfähigkeit der Verwaltung mit grösster Sorgfalt untersucht werden müsste, nicht zum wenigsten von den Arbeitervertretern selbst. Inzwischen kann eine Fülle von Erfahrungen und Versuchen aus verschiedenen Unternehmungen nutzbar gemacht werden.

Die Aufnahme von neuem Kapital ohne Beteiligung an der Kontrolle ist für weite Kreise der Geschäftswelt bereits eine vollendete Tatsache. Es ist mehrfach versucht worden, die bisher vom Aktionär ausgeübte Funktion der Kritik und Prüfung der Verwaltung auf andere Mechanismen zu übertragen. In erster Reihe ist hier der Ausschuss der Aktionäre, der Dennison-Werke (Shareholders' Committee of the Dennison Manufacturing Company Inc.) erwähnt worden und verschiedene andere Pläne, die eine ständige Kontrolle durch die Arbeiterschaft zum Ziel haben.

Der Gedanke einer öffentlichen Kontrolle, der Verwendung und Bildung von Kapital hat seinen Ausdruck gefunden in dem Vorschlag des Industrie-Enquête-Ausschusses der Liberalen in Gross-Britannien (Liberal Industrial Enquiry) für ein nationales Kapitalanlage-Amt (Board of National Investment). Dieser Vorschlag entspricht in vieler Beziehung den Ideen, die der Arbeit des Bundesreserve-Amtes (Federal Reserve Board) zugrunde liegen.

Da die erschöpfende Kenntnis der Tatsachen eine der wesentlichen Bedingungen wissenschaftlicher Arbeit ist, kann man damit rechnen, dass in Zukunft die Kontrollorgane einer Industrie oder eines Betriebes - ganz unabhängig von ihrer Zusammensetzung - viel umfassender und häufiger über Tatsachen und Zahlen der Geschäftsgebarung orientiert sein werden und darüber Auskunft erteilen werden, als dies heutzutage der Fall ist. Schon dies allein wird eine ungeheuere psychologische Wirkung auf alle Industriegruppen und auf die Haltung der mit der Verwaltung betrauten Organe ausüben. Finsternis und Schmutz, Heimlichkeit und Selbstsucht sind Zwillinge. Der ehrliche Administrator fürchtet eine offene Erklärung nicht und weicht ihr auch nicht aus. Ein englischer Publizist hat kürzlich einmal gesagt: Der Grad der Freiheit wird bestimmt durch den Grad der Oeffentlichkeit.

Wenden wir uns von der Finanzierung und Kontrolle zu anderen Verwaltungsmechanismen, die die Industrie einbauen muss, wenn sie ihr eigenes Schicksal nach Grundsätzen der wissenschaftlichen Wirtschaftsführung leiten will.

RATIONELLE ORGANISATION

Es wird zuweilen angenommen, dass die Rationalisierung zwangsläufig Vertrustung nach sich zieht, die Schaffung grosser Kontrolleinheiten unter gemeinsamem Aktienbesitz. Nach den bisherigen Erfahrugen bin ich durchaus nicht überzeugt, dass dies für jeden einzelnen Fall in einer bestimmten Industrie oder für die grosse Mehrheit der Industriezweige zutrifft. Es ist klar, dass das Nebeneinanderbestehen einer grösseren Anzahl kleiner, miteinander konkurrierender Betriebe in einem Industriezweig ohne gemeinsame Politik oder ohne ein gemeinsames Programm zu Kraftverschwendung führt und die Leistungsfähigkeit in hohem Masse beeinträchtigt. Aber andererseits haben wir, glaube ich, noch viel zu lernen in Bezug auf die Ueberwindung verwaltungstechnischer Schwierigkeiten bei der Leitung dieser grossen, unter einheitlicher Kontrolle stehenden Integrationsgebilde. Zur Zeit bestehen nur wenige bezw. noch gar keine objektiven Untersuchungen über die hier in der Industrie herrschenden Grundsätze. Doch die Aussagen zahlreicher führender Persönlichkeiten aus der Industrie bilden eine Fundgrube der Information über die Unzulänglichkeit der öffentlichen Verwaltung. Es bleibt noch festzustellen, wieweit diese Unzulänglichkeiten tatsächlich eine Funktion der Besitzformen der Unternehmungen sind, und wieweit eine normale Rückwirkung der menschlichen Natur auf Organisationsformen, die über ein bestimmtes Mass hinausgewachsen sind. Es tritt selbst bei gelegentlichen Beobachtungen klar zu Tage, dass die Unternehmungen und Leistungen der modernen Grossindustrie nicht ganz frei von gewissen überkommenen Lastern der Bürokratie sind. Ein Beispiel dafür bieten die Arbeitssysteme zahlreicher Privatbahnen.

Ueberdies muss der unparteiische Beobachter von dem besonderen Charakter der von Hoover in den Vereinigten Staaten durchgeführten Versuchen beeindruckt werden. Der Wunsch nach Verschmelzung des Aktienbesitzes oder der Kontrolle beruht auf der Anschauung, dass es unmöglich sei, gemeinsames Vorgehen oder die Durchführung eines gemeinsamen Programmes ohne die Geltendmachung von Zwang zu erreichen. Aber es wird von Tag zu Tag deutlicher, dass die Grenzen der Autoritätsgewalt streng festgelegt sind. Die Geschichte des XVIII. Amendements liefert den schlagenden Beweis. Hoover's Leitmotive werden dadurch charakterisiert, dass er seinen Feldzug zur Verbesserung dieser Zustände nicht auf eine Erweiterung gesetzlicher und staatlicher Machtbefugnisse und Verwaltungsmassnahmen stützt, sondern auf einen ausgesprochenen moralischen Kreuzzug, auf einen Versuch, die öffentliche Meinung zu gewinnen.

Ob er diesen Feldzug gewinnt oder nicht - offenbar hat er schon einen Erfolg erreicht, da es ihm gelungen ist, Geschäftsleuten den Wert gemeinschaftlichen Vorgehens deutlich zum Bewusstsein zu bringen. Seine verschiedenen Bemühungen bei der Handelskammer um Normierung und Vereinheitlichung in einer grossen Reihe von Industriezweigen, um die systematische Nutzbarmachung statistischer Zusammenstellungen zur Verhütung von Ueberproduktion, um die Gewinnung neuer, auf verbesserten Informationen beruhenden Absatzmöglichkeiten, auf den in- und ausländischen Märkten sind weltberühmt, aber nirgends ist etwas von Zwang oder gesetzlichen Massnahmen zu spüren. Die Entwicklung hat sich vielmehr im Wege stetiger Erziehungsarbeit und unablässiger Beibringung von Tatsachen vollzogen. Die Geschäftswelt hat gelernt zich zu fügen, nicht unter das Gesetz des Landes, sondern unter das viel strengere Gebot der Stunde.

Ich bin der Meinung, dass weitere Untersuchungen über die Frage der vereinheitlichten Kontrolle wahrscheinlich erweisen werden, dass es sich fast ausschliesslich um eine technische Frage handelt. Das heisst für jedes Erzeugnis und für jeden Betrieb wird sich mittels betriebswissenschaftlicher Methoden eine optimale, d.h. geringste Vergeudung bedingende Grösseneinheit finden lassen, und diese Einheit wird im Hinblick auf verschiedene Funktionen in dem gleichen Industriezweig verschieden sein, d.h. die optimale Grösse vom Gesichtspunkt der Produktion wird eine andere sein als die optimale Grösse vom Gesichtspunkt der Verteilung oder der Finanzierung. Und eines der wichtigsten Erfordernisse der rationell organisierten Industrie wird ein Untersuchungsinstitut für diese besonderen Probleme sein, das aus einem von der Industrie gemeinsam zu schaffenden Fonds unterhalten werden wird.
Solch ein zentrales Untersuchungsinstitut könnte jedoch keine vernünftige und wirkungsvolle Arbeit leisten ohne umfangreiches statistisches Material über die verschiedenen Einheiten in der Industrie. Und dieses Material muss - wenn es als Grundlage für wissenschaftlich zu rechtfertigende Schlüsse dienen soll, unbedingt vergleichbar sein - eine Forderung, die uns unausweichlich zur Normung der Berechnung von Produktionskosten und der Buchführung bringt. Aber auch hier sind meines Erachtens moralischer Druck und Berufsstolz wirksamer als Zwang. Die Vereinigung der Buchdruckermeister von Gross-Britannien (Federation of Master-Printers) hat seit fünfzehn Jahren ein solches System angewandt. Es ist eine ungeheure Wohltat für die Industrie, die Preisdrückerei ist heute fast ganz beseitigt worden. Ueber 80 % der Firmen in der Industrie haben es angenommen, aber Zwang ist nicht ausgeübt worden.

Aus dem Gesagten erhellt, dass eine rationell organisierte Industrie ferner Methoden der Vereinheitlichung und Normierung auf breiter Grundlage ausbilden und statistische Beobachtungen anstellen muss, zwecks Verhütung von Ueberproduktionen, die den Markt belasten. Dieser letzte Punkt führt uns zum Kernproblem der Rationalisierung, die Anpassung des Bedarfes an die potentielle Nachfrage.
Hier muss ein Unterschied gemacht werden zwischen den Industrien, bei denen die Höhe der Gesamtproduktion innerhalb eines bestimmten Zeitabschnitts von dem Willen und den Leistungen der Menschen abhängt, und den von Rohstoffen abhängigen Wirtschaftszweigen, bei denen die Ernteschwankungen alleBerechnungen über den Haufen werfen können. Natürlich besteht ein tiefgehendes, wenn auch allmählich gemildertes Vorurteil gegenüber allen Versuchen. Bei Verbrauchern, denen ein Jahrhundert lang gepredigt worden ist, dass die Konkurrenz der einzige Schutz gegen Ausbeutung ist, kann dies nicht weiter überraschen. Die unmittelbare Wirkung einer Ueberproduktion an irgendwelchen Gütern ist die scharfe Preissenkung auf dem ganzen Markt. Der Verbraucher erntet für kurze Zeit einen Gewinn. Aber wenn die Senkung so stark ist, dass die Gewinnspanne für einen grösseren Teil der Produzenten auf längere Zeit aufgehoben wird, so fragt es sich, ob der Verbraucher letzten Endes einen Vorteil hat. Solche Störungen der Industrie werden mit Kapitalverlusten und dem Ruin von Unternehmungen bezahlt, mit Arbeitslosigkeit und Stockungen in verbundenen oder von einander abhängigen Wirtschaftszweigen,. Und letzten Endes wird der Schaden doch aus der Tasche des Verbrauchers bezahlt. Dies ist nur die andere Seite der Auffassung von "hohen Löhnen". Ebenso

wenig wie ein Industrie-Produkt verbraucht werden kann, ohne dass die erforderliche Summe an Lohn und Dividende von der Industrie aufgebracht wird, ebenso wenig können Kapitalverluste ersetzt, und die Räder eines betroffenen Industriezweiges wieder in Gang gebracht werden, ohne Gewinne auf Kosten der Verbraucher. Der Weg fortschreitender Preisverbilligung für den Verbraucher führt nicht durch plötzliche Ausbrüche von Ueberproduktion, die sprunghafte Preisstürze zur Folge haben, sondern durch eine genügende Stabilität des Marktes, die es leistungsfähigen Wirtschaftseinheiten ermöglicht, ihre Leistungsfähigkeit allmählich durch vorausschauendes Planen und kühne Kapitalsanlagen für Betriebsverbesserungen zu steigern.

Soweit es sich um lagerfähige Rohstoffe handelt, wird meines Erachtens eine Kartellierung zum Zweck der Gewinnverteilung (a system of pooling margins) oder gemeinsamen Absatzregulierung erforderlich, wenn die Produktion auf neuer Grundlage aufgebaut werden soll. Aber es genügt vielleicht, wenn sich Produzenten in irgend einer Form auf Gegenseitigkeit versichern und das Risiko von Ernteüberschüssen decken, sowie jedes normale Risiko gedeckt wird. Hier wird an das Beispiels des Herrn Fox von den Molkereien erinnert.

Bei Fertigfabrikaten sind zwei Fälle in Betracht zu ziehen: Da sind erst einmal die Industrien, deren Produktions-Kapazität die Bedürfnisse des gegebenen Marktes überschreitet. Hier gibt es zwei Möglichkeiten: das Anlage- und Betriebskapital zu verringern oder den Markt zu erweitern. Gegenwärtig geht die Tendenz in Europa überall in die erste Richtung und tatsächlich kann eine überlegte Konzentration und Spezialisation von Betrieben unter Ausschaltung der schwachen Erzeuger notwendig werden, um eine Industrie gesund zu machen, die an wirtschaftlichen Störungen krankt. Aber wir müssen daran denken, dass die Industrie überhaupt nicht hätte erkranken dürfen. Das Vorhandensein leistungsunfähiger Produzenten in einer Industrie beweist die Existenz einer Anzahl von Fabriken, die nicht nach betriebswissenschaftlichen Grundsätzen geführt worden sind, und mehr noch, die kein angemessenes Teil früherer Gewinne auf die Erneuerung der Betriebseinrichtungen verwandt haben.

Mr. Garret drückt das in seinem fesselnden kleinen Buch "Das amerikanische Omen" (The American Omen) so aus: "Ueberproduktion ist eine Funktion der Betriebsverkalkung (over produktion is a function of obsolescence)." Dies ist ein Punkt, dem die nach wissenschaftlichen Grundsätzen organisierte Industrie der Zukunft die grösste Aufmerksamkeit zuwenden wird. Es ist ein Paradoxon des Wirtschaftslebens, dass die Geschäftsuntüchtigkeit eines Konkurrenten letzten Endes viel gefährlicher werden kann als die geschäftliche Tüchtigkeit.

Der zweite Weg, die Erweiterung der Märkte ist empfehlenswerter, weil er im Einklang mit rationellem wirtschaftlichem Handeln steht. Ich glaube, dass in dunkler Erkenntnis dieser Tatsache Grossbritannien zögert zwischen der Wahl einer Wirtschaftspolitik, die den Blick auf Europa richtet, und einer Politik, die die Entwicklung der imperialistischen Hilfsquellen zum Ziele hat. Die Begründung des Absatzamts des britischen Reiches (Empire Marketing Board) ist ein wohldurchdachter Versuch, das Wachstum eines Marktes in dieser Weise zu fördern. Eine zweite Möglichkeit, ein solches Wachstum zu fördern, liegt in der Entwicklung neuer Verwendungsmöglichkeiten für die Produkte einer Industrie oder sogar in der Schaffung neuer, von ihr zu befriedigender Bedürfnisse. Die rationell

organisierte Industrie der Zukunft wird sich nicht sträuben, die nötigen Mittel zur Verfügung zu stellen für die Führung einer Zentralstatistik über die einschlägigen Gebiete und für kombinierte Sonderuntersuchungen über technische- und Absatzfragen, und wenn möglich auch für deren gemeinsame Veröffentlichung.
Wahrscheinlich wird man sich bei der Führung einer Statistik über die gesamte Produktionskraft der Industrie automatisch mit der zweiten Möglichkeit zu befassen haben, nämlich mit der ständigen Gefahr der Ueberproduktion, die das Auftauchen neuer Unternehmungen in einem Wirtschaftszweig hervorruft. Eine rationelle Industriekontrolle wird den Zutritt neuer Unternehmungen nicht sofort unterbinden, sie wird erkennen, dass übergrosse Sicherheit genaue so gut ihre Gefahren hat wie übergrosse Störungen. Industrien können bequem und schwerfällig werden. Im Interesse der steigenden Leistungsfähigkeit brauchen wir einen einigermassen beständigen Zustrom von Anfängern, die ernsthaft darauf eingestellt sind, zu Produktionskosten herzustellen, die unter dem in der Industrie üblichen Niveau liegen. Aber sie müssen auch ernsthaft bemüht sein - ich will damit sagen, dass niemand überlegt und mit guten Absichten in einen Industriezweig hineingeht, in dem bereits eine entsprechende Produktion vorhanden ist, wenn der zu erwartende Gewinn nicht besonders hoch oder das allgemeine Niveau der Leistungsfähigkeit nicht besonders niedrig ist. Aber in der überwiegenden Mehrheit der Fälle gehen die Leute hinein, ohne eine Ahnung von der tatsächlichen Produktionskapazität zu haben. Ich glaube, dass die rationell geleitete Industrie dem Neuling ausreichendes statistisches Material über diesen Punkt zur Verfügung stellen wird, und dann wird er oft überhaupt nicht erst anfangen. Die Menschen entschliessen sich zu riskanten Anlagen nicht aus Böswilligkeit, sondern aus Unkenntnis.

Ich muss zum Schluss kommen. Man kann in einem einzelnen Vortrag natürlich nur die Oberfläche dieses riesigen Themas streifen. Ich habe nicht die Organisation geschildert, die eine nach wissenschaftlichen Grundsätzen organisierte Industrie für die kooperative Behandlung der Probleme des Arbeitsmarktes, der Arbeitsbedingungen, des Lohnwesens u.s.w. schaffen wird. Auch über das weite Betätigungsfeld für kooperative Forschungsarbeit mit Bezug auf die technischen und menschlichen Probleme der Industrie wäre noch viel zu sagen. Auf diesem Gebiet sind schon viele interessante Versuche gemacht worden. Und auch von dem einzelnen Betriebe habe ich nicht gesprochen. In jeder modernen Fabrik kommt eine Reihe von besonderen Funktionen vor und in jedem Betrieb muss jede dieser Funktionen den wissenschaftlichen Methoden unterworfen werden. Desgleichen müssen wir alle die hauptsächlichsten Punkte des individuellen Arbeitslebens in Betracht ziehen, die noch weiter zu erforschen sind, wenn wir Energieverschwendung vermeiden wollen, d.h. wenn wir die ganze Kraft jedes Einzelnen in den Dienst der Allgemeinheit stellen wollen.
Ich habe vor allem hervorzuheben versucht, dass unsere heutigen Anschauungen über die Triebkräfte der Rationalisierung noch vielfach von den alten Vorstellungen über die Rolle des Zwangs im Wirtschaftsleben getrübt sind. Eine sehr sorgfältige Analyse des Wesens der Kontrolle wird, glaube ich, erweisen, wie eng die praktischen Möglichkeiten für die Anwendung von Zwang begrenzt sind. Jedenfalls liegt vor uns noch ein weites, unbebautes Feld für die Ausgestaltung dieser neuen Formen der Inangriffnahme wirtschaftlicher Probleme, die wir Rationalisierung nennen.

Aber obgleich dieses Gebiet ungeheuer weit ist, so eröffnet es doch meiner Ueberzeugung nach unendliche Hoffnungen und Möglichkeiten. Bedenken Sie, wie jung dieser Gedanke ist. Erinnern Sie sich, welche Revolution er schon in den Weltwirtschafts-Anschauungen hervorgerufen hat. Als Beispiel erwähne ich nur die Bemerkung, die Ford und führende Persönlichkeiten der General Motors gegenüber den Pressevertretern gemacht haben, als diese erpicht auf Einzelheiten eines dramatischen, aber vernichtenden Konkurrenzkampfes waren. Vergegenwärtigen Sie sich, wie die alte fatalistische Vorstellung vom Konkurrenzkampf nicht nur zur Ablehnung jeder Verantwortung für die bewusste Regelung des Weltwirtschaftslebens geführt hat, sondern auch dazu, dass sich der Einzelne hinter einem Wall von Geheimnissen und Feindseligkeiten versteckt hielt mit der Wirkung, dass nicht nur die einfachsten, elementaren Tatsachen für die Bildung eines vernünftigen Urteils über geschäftliche Angelegenheiten fehlten, sondern dass auch alle ethischen oder geistigen Impulse, die aus der freien Aussprache mit Gleichgesinnten entspringen, dem Geschäftsmann versagt blieben. Nicht umsonst sind einige Vereinigungen von Industriellen, die sich in jüngster Zeit in verschiedenen Ländern zum Zwecke wechselseitigen Meinungsaustausches über gemeinsame Probleme der Geschäftsleitung gebildet haben, die "Universität der Geschäftsleute" genannt worden.

Und dieser Einfluss wird nicht auf das Wirtschaftsgebiet allein beschränkt bleiben. Ich glaube, dass dieser grosse neue Schritt vorwärts in unserem Denken über materielle Dinge auf unser gesamtes Kulturleben von Einfluss sein wird. Er hat uns schon hier in Elmau zusammengeführt, vor 14 Jahren kämpfte ich wie ein Tier, um mein Leben bei den Ställen von Hooge Chateau - vielleicht mit einigen von denen, die in diesem Raum sitzen. Die Organisation des materiellen Wohlstandes ist eines der grossen gemeinsamen Interessengebiete der Menschen innerhalb dessen bereits die Sphäre gegenseitiger Abhängigkeiten viel grösser ist als die Möglichkeit nationaler Isolierung. Sollte es nicht möglich sein, dass wir in dem Masse, in dem wir diese Probleme rationeller behandeln - d.h. mit weniger Furcht vor einander, mit weniger Aberglauben und mit weniger Rücksichtslosigkeit, wir auch den Weg zur Verständigung klarer erkennen in den politischen Konflikten, die die Nationen trennen.

DIE FESTSETZUNG OPTIMALER ARBEITSZEITEN

UNTER BESONDERER BERÜCKSICHTIGUNG DER FÜNF-TAGE-WOCHE, VON DR. H. M. VERNON, WISSENSCHAFTLICHER MITARBEITER DES INDUSTRIAL FATIGUE RESEARCH BOARD, LONDON.

Einführung. Die Dauer der Arbeitszeit in der Industrie ist eine Frage von universellem Interesse, über die eingehende Erörterungen auf verschiedenen internationalen Konferenzen in den letzten Jahren stattgefunden haben. Auf der Konferenz in Washington im Jahre 1919 zogen sich die Verhandlungen fast einen Monat hin; schliesslich wurde ein Abkommen mit 82 gegen 2 Stimmen angenommen, demzufolge empfohlen wurde, die Arbeitszeit von Personen, die in öffentlichen oder privaten industriellen Unternehmungen beschäftigt werden - abgesehen von gewissen Ausnahmen - nicht über acht Stunden täglich und 48 Stunden wöchentlich auszudehnen. Einer dieser Ausnahmen entsprechend wurde vereinbart, dass - falls weniger als acht Stunden an einem oder an mehreren Tagen gearbeitet würde - an anderen Tagen bis zur Höchstdauer von neun Stunden gearbeitet werden dürfte. Hieraus schien sich zu ergeben, dass im Fall der Annahme der Fünf-Tage-Woche, die Höchstzahl der wöchentlich zugelassenen Arbeitsstunden nur 45 und nicht 48 betragen würde. Diese Vereinbarung scheint jedoch auf der Londoner Konferenz, die im Jahre 1926 stattfand, wieder aufgehoben worden zu sein, denn damals wurde festgelegt (Artikel VI, b), dass die Arbeitsstunden in einer Woche auf fünf Tage verteilt werden könnten, oder innerhalb zweier Arbeitswochen auf elf Tage, "mit der Massgabe, dass die durchschnittliche Arbeitszeit keinesfalls über 48 Stunden in der Woche hinausgehen dürfe."

Obgleich das Abkommen von Washington erst von wenigen Staaten ratifiziert worden ist, darf man doch annehmen, dass die allgemeine Ratifikation wahrscheinlich nicht mehr lange hinausgeschoben werden wird. Daher ist es für uns von grossem Interesse, festzustellen, wieweit - wenn überhaupt - die Verkürzung der Arbeitszeit auf 48 Stunden in der Woche die Produktion zu beeinflussen vermag. Die Ratifikation des Abkommens würde für England praktisch kaum ins Gewicht fallen, denn zur Zeit arbeiten nur 7 % aller gewerblichen Arbeiter mehr als 48 Stunden wöchentlich. In anderen Ländern wird die davon betroffene Zahl von Arbeitern im allgemeinen grösser sein. In Deutschland ist durch die Untersuchung der Reichsregierung im Jahre 1926 festgestellt worden, dass 48 % der Arbeiterschaft in der Metallindustrie und 63 % in der Textilindustrie länger als 48 Stunden in der Woche arbeiten.

Ist die 48-Stunden-Woche die optimale Arbeitszeit? Wenn wir die Wirkungen einer Annahme der 48-Stunden-Woche richtig einschätzen wollen, so müssen wir nicht nur die Ertragsziffern, sondern soweit wie möglich auch den Einfluss der verkürzten Arbeitszeit auf die Gesundheit der Arbeiter und den Grad ihrer Zufriedenheit mit den Arbeitsbedingungen, wie er sich im Arbeiterwechsel und in der Tendenz zu streiken ausprägt, zu berücksichtigen suchen. Eine unzufriedene Arbeiterschaft, die oft streikt, wird in einem längeren Zeitraum kaum so hohe Produktionsziffern erzielen wie eine zufriedene Belegschaft, die infolge verkürzter Arbeitszeit niedrige wöchentliche Erträge aufweist.

Die Wirkungen der 48-Stunden-Woche auf die industrielle Produktivität hat P. S. Florence [1] in einem im Jahre 1924 veröffentlichten Artikel in der **Internationalen Rundschau der Arbeit** behandelt, und ist

zu dem Ergebnis gekommen, dass sie dem Kriterium des höchsten Ertrages bei geringsten Unfallsziffern Zeitverlusten und Generalunkosten am nächsten kommt. Ein Jahr später erörterte Professor Edgard Milhaud[3] das Problem in derselben Zeitschrift und konnte sich dabei auf ein umfangreiches Material stützen, da er sich mehrere Jahre lang im Auftrag des Internationalen Arbeitsamtes mit einer Untersuchung über die industrielle Produktion der Weltwirtschaft befasst hatte. Seine Ergebnisse über die Wirkungen einer Annahme der 48-Stunden-Woche fielen nicht so günstig aus wie die von Florence, nach dessen Feststellungen wissenschaftliche Untersuchungen in verschiedenen Ländern bewiesen haben, "dass mit wenigen Ausnahmen nach erheblicher Verkürzung der Arbeitszeit die Produktion nur durch erhöhte Arbeitsintensität bei gleichzeitigen technischen Verbesserungen aufrecht erhalten werden kann. Die Auffassung, dass erhöhte Arbeitsintensität einen völligen Ausgleich für die Verkürzung der Arbeitszeit schaffen kann, wird allgemein als eine Verkennung der ökonomischen Bedeutung und des Zweckes der Arbeitsverkürzung, im besonderen des Achtstunden-Tages, angesehen."

Milhaud's Schlüsse scheinen sich grösstenteils auf Ansichten von Arbeitgebern zu stützen und nicht auf Ergebnisse unmittelbarer eigener Forschungen. Die Ansichten der Arbeitgeber sind wahrscheinlich irreführend, denn letztere neigen natürlich zu übergrosser Vorsicht, wenn es sich um Urteile über die Verkürzung der Arbeitszeit handelt. Gegen die Uebernahme ihrer Auffassung spricht aber noch ein triftiger Grund, nämlich die Tatsache, dass sich nur wenige von ihnen klar machen, dass die Arbeiter nach einer Verkürzung der Arbeitszeit mehrere Monate brauchen, um sich den neuen Arbeitsbedingungen vollauf anzupassen, und um ein höheres ständiges Leistungsniveau zu erreichen. Die meisten Arbeitgeber begnügen sich damit, die Leistungen drei bis sechs Monate unmittelbar vor und unmittelbar nach der Veränderung der Arbeitszeit zu vergleichen, und dann wird grösstenteils die Wirkung der Verkürzung auf die Arbeitsintensität noch nicht erkennbar. Als Ergebnis wochenlanger Untersuchungen während eines Zeitraumes von 21 Monaten über die Leistungen grösserer Gruppen von Arbeitern und Arbeiterinnen, die mit der Herstellung von Zündern beschäftigt waren, fand ich z.B.[4], dass bei Herabsetzung der Arbeitszeit von 74½ Stunden auf 63¼ Stunden und weiterhin von 63¼ auf 55¼ Stunden keine Steigerung der Produktionsziffer während der ersten zwei bis drei Wochen festzustellen war. Dann stieg sie langsam und erreichte in zwei bezw. vier Monaten eine ständige Höhe, und zwar um 21 bis 29 % höher als vorher. Als die Arbeitszeit einer Gruppe von Stahlschmelzern von zwölf auf acht Stunden je Schicht herabgesetzt worden war, dauerte es dreizehn Monate bis die Produktionssteigerung ihr Maximum erreicht hatte. Ebenso fanden Mather und Platt[4], als sie die Dauer der Arbeitswoche von 53 auf 48 Stunden in den Salford-Eisenwerken herabsetzten, dass es mehr als acht Monate dauerte, bis der Höhepunkt der Produktion erreicht war.

Eine Analyse des verfügbaren statistischen Materials über die Verkürzung der Arbeitszeit von 54 auf 48 Stunden zeigt, dass in fast allen Fällen die Beschleunigung der Produktion so zunahm, dass die kürzere Arbeitszeit kompensiert wurde und dass sich somit tatsächlich eine Zunahme der Gesamtproduktivität ergab. Bei der oben erwähnten Untersuchung von Mather und Platt war der Ertrag der Fabrik, die sowohl Arbeiter in Akkord- wie im Stundenlohn beschäftigte, nachdem die 48-Stundenwoche

eingeführt war, 0,1 % grösser als während der 53-Stundenwoche. In einem anderen Maschinenwerk führte die Verkürzung der Arbeitsstunden von 54 auf 48 zu einer leichten Produktionssteigerung, und in einem weiteren Falle konnte bei Verkürzung von 54 auf 51 Stunden eine Erhöhung der Produktionskosten nicht festgestellt werden. (7, Seite 65.) In einem anderen Industriezweig, dem Kohlenbergbau, führte die Verkürzung der Arbeitszeit von 10 auf 8 Stunden täglich in einigen amerikanischen Bergwerken eine durchschnittliche Steigerung der Produktion von 17 % pro Kopf des Arbeiters herbei. Und diese Verbesserung war ausschliesslich der erhöhten Arbeitsintensität der Leute zuzuschreiben und nicht irgendwelchen Verbesserungen des Betriebes. Ein Granitschneidewerk stellte ferner fest, dass seine Arbeiter mehr Arbeit an einem neunstündigen Arbeitstag leisteten als an einem Zehnstundentag und noch mehr an einem Achtstundentag bei sonst gleichbleibenden Arbeitsbedingungen. (7, Seiten 64 und 65.)

Auf Grund des Mather und Platt-Versuches setzten mehrere Staatsbetriebe in England, die Geschütze, Marine- und Heeresbedarfsartikel und Kleidung produzieren, ihre Arbeitszeit von 53¾ auf 48 Stunden wöchentlich herab und fanden, dass sowohl die Akkord- wie die Stundenlohnarbeiter ebenso viel wie vorher verdienten. Der detaillierteste und durch Beweismaterial am zuverlässigsten begründete Bericht ist wohl der von Abbé[1], der die Arbeitszeit in den Optischen Werken von Zeiss von 9 auf 8 Stunden täglich verminderte und zu dem Ergebnis kam, dass in der Folge die Gesamtproduktion einer Gruppe von 233 Arbeitern, auf die sich die Untersuchung erstreckte, eine durchschnittliche Leistungssteigerung von 3,3 % aufwies.

In England ist es jetzt sehr schwer, Beweise über die Wirkungen der Einschränkung der Arbeitszeit zu erbringen, da die 44- bis 48-Stundenwoche mit Ausnahme einiger ununterbrochener Betriebe fast überall eingeführt ist. Florence[2] berichtet indessen von einigen neueren Ergebnissen aus der Schuhindustrie, die ihm durch Vernon und Bedford vermittelt wurden. Aus diesem Material geht hervor, dass die Leistung einer Gruppe von Arbeitern, die mit "Anklopfen" beschäftigt waren, von 4 auf 6 % stieg, als ihre Arbeitszeit von 52½ auf 47½ Stunden wöchentlich herabgesetzt wurde, während die Leistungen einer Arbeiterinnengruppe, die mit "Steppen" beschäftigt wurde, um 22 % stieg.

Fast alle vorstehend erwähnten Arbeiten werden von Menschen geleistet oder von Menschen und Maschinen in mehr oder weniger ungleichem Verhältnis, sodass eine Verkürzung der Arbeitsstunden durch einen Mehraufwand an menschlicher Energie ausgeglichen werden kann. In einigen Industrien ist aber der Anteil der Maschinen so gross, und der der menschlichen Arbeit so klein, dass ein Ausgleich nur in geringem Masse möglich ist. In Baumwoll-Spinnereien zum Beispiel hat eine einzige Arbeiterin zuweilen 1000 Spindeln zu überwachen und ihre Arbeit besteht darin, die Enden gebrochener Fäden zusammenzufügen und leere Spulen durch volle zu ersetzen. Die Spindeln drehen sich mit einer bestimmten Schnelligkeit und der durch brechende Fäden verursachte Zeitverlust beträgt im Durchschnitt weniger als 1 % der ganzen Spinnzeit, sodass hier wenig Möglichkeiten gegeben sind, Zeit durch erhöhte menschliche Anstrengung zu gewinnen. Auch bei den ununterbrochenen Arbeitsprozessen ist gewöhnlich nicht viel Raum zu Leistungsverbesserungen gegeben. Die früheren Zwölf-Stunden- (Tag- und Nacht)-Schichten sind (in England) durch drei

aufeinander folgende Achtstunden-Schichten ersetzt worden. Aber es ist für die Arbeiter der kürzeren Schichten unmöglich, 50 % Mehrleistung zu erzielen. In der Tat kann die Produktion der Hochöfen, die beinahe immer aufgefüllt sind, kaum vermehrt werden. Doch können die Leistungen der Stahlschmelzöfen etwas in die Höhe gehen, und in einigen Fällen ist es möglich gewesen, die Zahl der erforderlichen Arbeiter zu verringern.[8]

Es ist nicht möglich abschliessend zu sagen, in welchem Umfang Männer und Frauen in der Industrie mit Arbeiten beschäftigt werden, bei denen die Verkürzung der Arbeitszeit auf 48 Stunden in der Woche kompensiert werden kann durch erhöhte Arbeitsintensität; aber aus meiner eigenen, ziemlich grossen Erfahrung auf diesem Gebiet nehme ich an, dass es in England wohl mehr als die Hälfte, wenn nicht zwei Drittel sind.

Es kann angenommen werden, dass, wenn eine Einschränkung der Arbeitszeit auf 48 Wochenstunden zu einer Erhöhung des Ertrages in den meisten Industrien führt, eine weitere Herabsetzung eine noch grössere Steigerung zur Folge haben würde. Es wird auch tatsächlich in manchen Betrieben nur 44 Stunden gearbeitet, aber man hat nur wenig Unterlagen über die Wirkung auf den Ertrag. Es ist konstatiert worden, dass in einer grossen Seifenfabrik (7, Seite 69) der Ertrag gleich blieb, als die Arbeitsstunden von 53 auf 48 herabgesetzt wurden und dann auf 44, obwohl es nötig gewesen war, das Tempo der Maschinen - soweit Arbeit an Maschinen in Frage kam - zu beschleunigen. Ein Fabrikant von Isolierarbeiten schränkte die Arbeitszeit von acht auf sieben Stunden ein: die Arbeiter fanden bald heraus, dass sie in der verkürzten Arbeitszeit das gleiche leisten konnten wie vorher.

Wenn man die Industrie als Ganzes nimmt, so ist es unwahrscheinlich, dass der Ertrag der gleiche bliebe, wenn die Stundenzahl weit unter 48 herabgesetzt würde, trotzdem es möglich wäre, eine Herabsetzung auf 44 Stunden, gegebenenfalls auch auf 40 Stunden durch einen erhöhten Aufwand an menschlicher Energie in Betrieben, in denen die Handarbeit eine Rolle spielt, auszugleichen. Es ist aber möglich, die Arbeitsstunden in anderer Weise, zu verringern und die Produktion zu erhöhen, nämlich wenn man das Zwei-Schichten-System einführt. In England ist es unter gewissen Bedingungen gestattet, eine erste Schicht von 6 Uhr früh bis 2 Uhr mittags und eine zweite von 2 bis 10 Uhr an die Stelle einer einzigen Acht- bis Neunstundenschicht zwischen 8 Uhr vormittags und 6 Uhr nachmittags zu setzen. Bei dem Zweischichten-System haben die Arbeiter nur eine Pause von ½ Stunde in der Mitte der Schicht. Sie arbeiten also 7½ Stunden pro Tag. Sie arbeiten wochenweise fünf oder sieben Schichten, sodass sie durchschnittlich 41½ Stunden pro Woche arbeiten. Smith und Vernon[9] untersuchten die Leistungen von 2400 Frauen, die drei Monate und mehr in Tagesarbeit und im Schichtwechsel beschäftigt worden waren, und zwar im ganzen in acht Fabriken; die Beschäftigung bestand in Drahtwickeln, Drahtziehen, Kabelarbeit und Weben. Ihre Leistungen und Arbeitszeit zeigten die folgenden kleinen Abweichungen:

	Wöchentliche Arbeitszeit	Stunden-leistungen	Wochen-leistungen		
Schichtarbeiterinnen	41	2.39	41	2.39	98
Tagesarbeiterinnen	49	2.08	49	2.08	102

Die stündliche Arbeitsleistung der Schichtarbeiter war 15 % grösser als die der Tagesarbeiter, aber da sie acht Stunden weniger in der Woche arbeiteten, blieben sie mit ihrer Wochenleistung doch zurück. Hingegen ist in Betracht zu ziehen, dass beide Schichten zusammen soviel mehr produzierten, als die einzelne Tagesschicht, dass die Ersparnis an Generalunkosten den kleinen Verlust an Einzelleistungen bei weitem kompensierte.

Welches ist die beste Einteilung der Arbeitszeit? Wie ist bei Annahme der 48-Stunden-Woche die Arbeitszeit am besten einzuteilen? In England ist überall der halbe Sonnabend frei, daraus ergibt sich, dass, wenn am Sonnabend nur am Vormittag gearbeitet wird, 8¾ Stunden auf die übrigen Tage verteilt werden müssen; oder, dass wenn die Arbeit am Sonnabend Vormittag überhaupt abgeschafft wird 9½ oder 9¾ Stunden gearbeitet werden müssen. Also:

	Mon.	Dienst.	Mittw.	Donnerst.	Freit.	Sonnab.
5½-Tageswoche	8¾	8¾	8¾	8¾	8¾	4¼
5 -Tageswoche	9½	9¾	9½	9¾	9½	

In England ist es üblich, täglich zwischen zwei Arbeitsabschnitten eine Mittagspause von einer Stunde einzulegen. Die Arbeitszeit von 8¾ Stunden wird also in einen Abschnitt von 4½ und einen von 4¼ Stunden oder in Abschnitte von 4¾ Stunden und 4 Stunden zerlegt, während eine Arbeitszeit von 9¾ Stunden in Abschnitte von 5 und 4¾ Stunden geteilt wird. Auf jeden Fall ist es nur möglich eine ununterbrochene Arbeit von mehr als vier Stunden zu vermeiden, wenn die Arbeitswoche auf 44 Stunden beschränkt wird. Eine 44-Stunden-Woche lässt sich gut in Abschnitte von vier und vier Stunden von Montag bis Freitag und von vier Stunden am Sonnabend teilen.

Wenn ein Arbeiter 4¼ oder 5 Stunden hintereinander arbeitet, so heisst das, dass er (oder sie) fast 6 Stunden ohne Nahrung bleibt. Eine Rundfrage, die an mehrere Fabriken gerichtet wurde[11] erwies, dass die Arbeiter in Anbetracht der Entfernungen, die sie zurückzulegen hatten und der Verkehrsschwierigkeiten durchschnittlich mehr als 40 Minuten für den Weg vom Haus zur Fabrik brauchten, und dass zwischen Frühstück und Mittagessen ungefähr 6 Stunden lagen. Die Arbeiter empfinden diese Zeitspanne als zu lang und pflegen sich daher Essen mit in die Fabrik zu bringen und dies heimlich zu verzehren. Darum ist es besser, eine **Arbeitspause** von ungefähr 10 Minuten in der Mitte jeden Arbeitsabschnittes, der mehr als 4 Stunden beträgt, einzulegen, und den Arbeitern das Verzehren des mitgebrachten Essens zu gestatten. In manchen Fabriken in England erhalten die Arbeiter von der Betriebsleitung auch eine Tasse Tee. Die Unterbrechung einer langen Arbeitszeit durch eine kurze Pause hat psychologische und physiologische Vorteile, denn zwei Arbeitsabschnitte von 2 bis 2½ Stunden wirken weniger lang und anstrengend als ein Abschnitt von 4¾ Stunden. Man könnte annehmen, dass die Leistungen durch den Verlust an Arbeitszeit wesentlich heruntergingen, doch dies ist im allgemeinen nicht der Fall. Vernon und Bedford[10] sammelten Auskünfte von verschiedenen Fabriken über Frauen, die etikettierten, Pakete verschnürten, Schuhe herstellten, Fahrradketten fügten und Taschentücher falteten und nähten. Es ergab sich, dass die Ein-

fügung einer Pause von zehn Minuten in der Mitte eines Arbeitsabschnittes von 4½ Stunden den wöchentlichen Ertrag um 6 % durchschnittlich steigerte. Das bedeutete, dass die Frauen ihr Arbeitstempo bis zur Ueberkompensierung des täglichen Verlustes von 10 Minuten Arbeitszeit beschleunigten. Es ist bemerkenswert, dass in diesen Fällen und den früher erwähnten, die zu einer Verkürzung der Arbeitszeit führten, ein Zeitraum von drei bezw. sechs Monaten verstrich zwischen der Einführung der Ruhepause und der Erreichung des erhöhten Ertrages.

Wenn die 5½ Tage-Woche eingeführt ist, so wird die Arbeitszeit von täglich 8¾ Stunden am besten in einen Vormittagsabschnitt von 4¾ Stunden mit einer kurzen Pause dazwischen und einem Nachmittagsabschnitt von 4 Stunden ohne Pause geteilt. Bei der 5-Tage-Woche macht die tägliche Arbeitszeit von 9½ oder 9¾ Stunden eine Pause im Nachmittagsabschnitt und im Morgenabschnitt notwendig. Es ist einige Male festgestellt worden, dass die Einführung solcher Pausen den Verlust von ziemlich viel Zeit über die nominelle Pause hinaus zur Folge hat, weil die Arbeiter den Arbeitsschwung verlieren, und nur mit Schwierigkeiten zu pünktlichem Arbeitsbeginn nach der Pause zu bringen sind. Sicher kann extra Zeit verloren gehen, aber es ist festgestellt worden[11], dass in einigen Fabriken mit guter Disziplin die offiziellen Pausen nicht überschritten wurden. Ferner ist festgestellt worden, dass in bestimmten fast ununterbrochenen Arbeitsprozessen, die mit der Herstellung von Chokolade und Bisquits verbunden sind, die Einführung der Pause extra Zeitverluste zur Folge hat, die durch die Einstellung und Wiederaufnahme der Arbeit verursacht werden. Dieser Einwand kann jedoch durch die Einstellung von Ersatzarbeitern behoben werden, oder durch eine Arbeitsanordnung, auf Grund deren verschiedene Gruppen von Arbeiterinnen ihre Pause nacheinander und nicht gemeinsam haben.[11]

Vorteile und Nachteile der 5-Tage-Woche. In den letzten Jahren ist die 5-Tage-Woche in zunehmendem Masse in Betrieben in Grossbritannien eingeführt worden. Sie hat gewisse offensichtliche Vorteile für die Arbeiterschaft sowohl wie für die Betriebsleitung. Die Arbeiter haben einen freien Sonnabend, der es den Leuten ermöglicht, auf ihr Stückchen Land oder in ihre Gärten hinaus zu fahren, und in ihrer Freizeit zu spielen oder sich sonstwie zu vergnügen. Die Frauen besorgen meist den Haushalt und arbeiten manchmal soviel, dass der freie Tag für sie durchaus kein Feiertag ist. Ferner sparen die Arbeiter die Kosten der Fahrt zur Fabrik und haben einen gewissermassen angebrochenen und unbefriedigenden halben Arbeitstag weniger. Die Betriebsleitungen sparen zum Teil an Generalunkosten, weil sie die Hochöfen und die Dampfmaschinen nicht im Gang zu halten brauchen. Sie haben ausserdem eine willkommene Gelegenheit, Maschinen und Werk zu reinigen und Ausbesserungen vorzunehmen.[5]

Es ist daher nicht erstaunlich, dass dort, wo die 5-Tage-Woche eingeführt ist, Arbeiter und Arbeitgeber sehr von dem System eingenommen sind. Gleichzeitig sprechen dagegen aber manche Bedenken, die meines Erachtens die Vorteile überwiegen. Wie ich schon hervorgehoben habe, bedingt die 5-Tage-Woche einen Arbeitstag von 9¼ bis 9¾ Stunden, während die 5½-Tage-Woche die 8¾-Stunden-Arbeit in einem Zuge erfordert. Der Arbeiter gewöhnt sich allmählich an die Arbeitszeit, wie lang sie auch sein mag. Bei langen Arbeitszeiten arbeitet er zweifellos

weniger intensiv als bei kürzeren, das heisst, bei dem 5½-Tage-System leistet er ein Arbeitspensum, das einem 8¾ stündigen Tagewerk oder 8¾ mal 6 = einer 52½-Stunden-Woche entspricht. Während er bei der 5-Tage-Woche ein Pensum leistet, das einer 57½-Stunden-Woche entspricht. Wenn er von diesen langen Arbeitsstunden übermüdet ist, hat er allerdings mehr Freizeit zur Erholung durch das längere Wochenende; ist das aber wirklich ein Vorteil? Es ist allgemein bekannt, dass die meisten Arbeiter am Montag Morgen nach der Wochenend-Freizeit sehr widerwillig an die tägliche Plackerei gehen, und die Leistungen sind in den Fabriken am Montag fast ausnahmlos geringer als an den anderen Wochentagen. Nach einer Freizeit von mehreren Tagen ist der Rückgang in der Leistung und die Abneigung gegen die Arbeit bedeutend grösser als am Montag-Morgen. Daraus ist zu folgern, dass zwei freie Tage, wie sie sich aus der 5-Tage-Woche ergeben, eine mittelbare Wirkung auf die Arbeitslust und die Leistung ausüben. Da der Gegensatz zwischen den Freuden einer zweitägigen Freizeit und der Plage von fünf langen Arbeitstagen grösser ist als der zwischen einem freien Tag und sechs darauf folgenden kurzen Arbeitstagen, so ist es ganz natürlich, dass die Arbeiter ganz besonderen Wert auf die zweitägige Freizeit legen. Aber wie ist der Einfluss auf ihre Leistungen? Leider liegen, soweit mir bekannt ist, noch keine genauen Untersuchungen über diese Frage vor, aber ich wage zu behaupten, dass bei einer sorgfältigen vergleichenden Studie über die Leistungen bei dem 5-Tag- und die Leistungen bei dem 5½-Tage-System das Urteil zu Gunsten des letzteren ausfallen würde, ganz besonders wenn es sich um die Leistungen von Frauen handelt, die nicht so lange Arbeitszeiten aushalten können wie Männer.

QUELLENANGABE.

[1] Abbé, "Gesammelte Abhandlungen", Vol. 3, 1906.

[2] Florence, P. S., "The Forty-Eight Hour Week and Industrial Efficiency." International Labour Review, Vol. X, pp. 729-758, 1924.

[3] Milhaud, E., "The Results of the Adoption of the Eight-Hour Day." International Labour Review, Vol. XII, pp. 820-853, 1925, Vol. XIII pp. 175-210, 1926.

[4] Mather W., "The Forty-Eight Hours Week." Manchester, 1894.

[5] "Report of Chief Inspector of Factories for 1925", pp. 1-139. London, 1926.

[6] Smith, M. and Vernon, M. D., "The Two-Shift System in Certain Factories". Report Nr. 47 of Industrial Fatigue Research Board. pp. 17-30. 1928.

[7] Vernon, H. M., "Industrial Fatigue and Efficiency", pp. 1-264. London, 1912.

[8] Vernon, H. M., "Fatigue and Efficiency in the Iron and Steel Industry." Report Nr. 5 of Industrial Fatigue Research Board, pp. 1-99. 1920.

[9] Vernon, H. M., "The Speed of Adaptation of Output to Altered Hours of Work." Report Nr. 6 of Industrial Fatigue Research Board. 11. 1-33. 1920.

[10] Vernon, H. M. and Bedford, T., "The Influence of Rest Pauses on Light Industrial Work." Report Nr. 25 of Industrial Fatigue Research Board. pp. 1-20. 1924.

[11] Vernon, H. M. and Vernon M. D., "Five-Hour Spells for Women, with Reference to Rest Pauses." Report Nr. 47 of Industrial Fatigue Research Board. pp. 1-16. 1928.

PERSONALPOLITIK UND PERSONALPFLEGE, VON DR. C. H. NORTHCOTT, ARBEITSLEITER DER FIRMA ROWNTREE & Co. LTD., YORK, ENGLAND.

Mein Thema ist sehr weit gefasst. Die Begriffe Personalpolitik und Personalpflege schliessen sehr verschiedene Dinge ein. Ich möchte drei Punkte herausgreifen und mich mit diesen zuerst beschäftigen. Diese Punkte sind:

die Form der Betriebsleitung und ihr Einfluss auf die Personalpflege;
das Verhalten der Arbeiterschaft zur Personalpolitik;
Auswahl, Ausbildung und Aufstieg von Arbeitern und Angestellten.

Der dritte Punkt, Auswahl, Ausbildung und Aufstieg von Arbeitern und Angestellten, wird von Miss Smith, psychologische Assistentin in der Firma Rowntree & Co., die über eine mehr als 6½ jährige Erfahrung auf diesem Gebiet verfügt, behandelt werden.

Sie werden mir zugeben, dass die erste der von mir angeregten Fragen, Formen der Betriebsleitung, für die Personalpflege von weitgehender Bedeutung ist. Verwaltung und Politik bestimmen die einzelnen praktischen Massnahmen, und wenn eine nach betriebswissenschaftlichen Grundsätzen geleitete Industrie den Arbeiterinteressen irgendwie Rechnung tragen will, so müssen Arbeiterfragen gebührend berücksichtigt werden. Daher müssen Industrie und Einzelbetrieb so organisiert werden, dass auf Personalfragen und menschliche Beziehungen in der Betriebspolitik genügendes Gewicht gelegt wird.

Mein Thema zwingt mich, kurz auf einige Organisationsformen einzugehen. Sie werden sich erinnern, dass wir am zweiten Tage, als Herr von Haan verschiedene graphische Darstellungen zu erläutern suchte, in gewisse Schwierigkeiten geraten sind. Niemand hatte den Mut, den Begriff "Stab- und Liniensystem" ("Line and Staff") und andere Organisationssysteme zu definieren. Ich kann mich dieser Aufgabe heute nicht entziehen und nehme also meinen Mut in beide Hände und empfehle mich Ihrer Gnade.

Die alte Organisationsform ist - wie wir in England sagen - das Abteilungssystem (departmental type), das bedeutet die Kontrolle der ganzen Abteilung durch einen Mann, der nicht nur den Betrieb in den betreffenden Räumen, sondern überhaupt alles zu überwachen hat, was dort geschieht, einschliesslich der Einstellung von Arbeitern, der Lohnfestsetzungen, der Entlassung von Arbeitnehmern und allen möglichen Personal-Angelegenheiten. In jeder grösseren Unternehmung bringt diese Organisationsform leicht eben so viele Maximen der Arbeitspolitik hervor wie Abteilungsleiter vorhanden sind. Das ist aber für eine rationell organisierte Wirtschaft nicht wünschenswert; hier sollte vielmehr Einheitlichkeit in der Arbeitspolitik, -praxis und in den einzelnen Massnahmen herrschen. Das Abteilungssystem versagt daher in diesen Fragen. Es gibt noch einen anderen, zwar nur zuweilen hervortretenden, aber doch sehr bezeichnenden Einwand, den ich darum vorbringen möchte. Bekanntlich kommt es unter diesen Umständen manchmal vor, dass ein Leiter oder ein Werkmeister einen Mann entlässt, und dass dieser dann in eine andere Abteilung geht und tatsächlich auch dort angenommen wird, gerade so, als ob er zu einer anderen Firma gegangen wäre. Durch einen solchen Missbrauch verurteilt sich dieser Organisationstypus selbst.

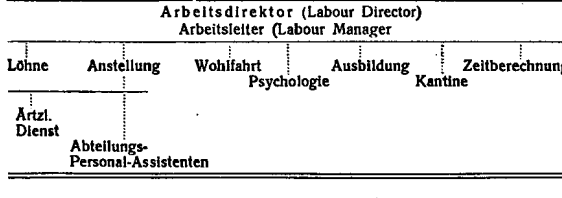
Den zweiten Typus pflegen wir im Englischen mit "Stab- und Liniensystem" zu bezeichnen, - und nun stürze ich mich in die erregten Fluten.

Die "Stab- und Linienformation" ("line and staff") ist der militärische Organisationstypus. Mit dem Chef an der Spitze. So fasse ich diese Formation auf. Der Stab besteht aus Sachverständigen, die die Vorschläge machen. Wahrscheinlich sind hier viele Mitglieder der Stäbe anwesend, deren Kenntnisse und Erfahrungen ausser allem Zweifel stehen, und die gute Ratschläge erteilen können. Die genannte Organisationsform verleiht jedoch dem Sachverständigen keine Autorität, stellt ihn (oder sie) mit der Befugnis, Vorschläge zu machen, gewissermassen kalt, ohne die Möglichkeit, das, was auf lange Sicht ratsam, zweckvoll und für den Betrieb förderlich erscheint, nun auch wirklich durchzusetzen.

Dies sehe ich als den stärksten Einwand gegen das "Stab- und Liniensystem" in allen Fragen an, die die menschlichen Beziehungen betreffen. Wenn die menschlichen Beziehungen ein wichtiger Faktor in der Industrie sind, dann müssen wir den Persönlichkeiten, die sie zu pflegen und zu überwachen haben, eine Stellung im Betrieb geben, die es ihnen ermöglicht, eine gerechte und kluge Personalpolitik durchzuführen, die auf lange Sicht ökonomisch und rentabel ist.

Ich wende mich daher dem dritten Organisationssystem zu, das man "funktionelles System" zu bezeichnen pflegt. Der Grundgedanke dieses Systems ist, wie ich hoffe, klar. Dr. Vernon hat es sehr einleuchtend so charakterisiert: wie in dem Körper die verschiedenen Organe ihre Funktion zu erfüllen haben, so geschieht es auch in der Organisation des Betriebes. Besondere Organe üben auch hier bestimmte Funktionen aus, die ineinandergreifen, und alle arbeiten so harmonisch zusammen wie die Organe unseres Körpers.

Bei diesem Typus der Organisation ist die Verantwortung nicht auf bestimmte Räume beschränkt. Sie "geht nicht nach Abteilungen", wenn ich so sagen darf, um den Ausdruck "räumliche Begrenzung" (area) zu erklären. Es handelt sich vielmehr um eine kombinierte Verantwortung oder besser Tätigkeit. Auf dieser Tagung der I. R. I., hoffe ich, darf davon ausgegangen werden, dass betriebswirtschaftliche Fragen ineinandergreifen und miteinander verquickt sind, kurz als Fragenkomplex bezeichnet werden können. Wenn wir alle zusammenhängenden Verantwortungen vereinen und sie zur Verantwortung einer Persönlichkeit machen, so erhalten wir den funktionellen Typus der Arbeitsverwaltung. Von diesem Typus möchte ich ein paar Minuten sprechen und wende mich daher dem Schaubild an der Tafel zu:



Der Arbeitsdirektor ist das Mitglied der Direktion, das für alle Personalangelegenheiten verantwortlich ist.
Der Arbeitsleiter ist verantwortlich für die Durchführung dieser ganzen Reihe zusammenhängender Funktionen. Er hat die Arbeit zu tun. Der Direktor hat die Verwaltung - um hier einmal scharf den Unterschied hervorzuheben. Diese Unterscheidung hat Oliver Sheldon in seinem lehrreichen Buch "Grundlagen der Betriebsführung" ("The Philosophy of Management") klar herausgearbeitet. Betriebsführung schliesst Verantwortung für zwei wichtige Dinge ein, nämlich: Personalpolitik und Kostenaufwand; und in beiden Fragen gilt der Arbeitsdirektor als Vertreter der Werksdirektion.
Der Arbeitsleiter ist mehr als ein Leiter des Anstellungsbüros. Seine Verantwortung erstreckt sich auf ein viel weiteres Gebiet als das der Arbeitereinstellung. Sie werden gleich sehen, dass die Lohnfragen zum Aufgabenkreis des Arbeitsleiters gehören. Viele von Ihnen werden annehmen, dass die Regelung der Löhne Sache der Produktionsabteilung ist; in unserer Firma sind die Verantwortungen geteilt und gegeneinander abgegrenzt. Mein Kollege, der Produktionsleiter (production manager) ist für Zeitberechnungen und für alle Untersuchungen zwecks Feststellung des optimalen Ertrages verantwortlich. Meine Aufgabe ist es, dafür zu sorgen, dass die Löhne angemessen und gerecht sind und den mit der Arbeitervertretung getroffenen Vereinbarungen entsprechen. Die anderen Bezeichnungen auf dem Schaubild erfordern nicht viel Ergänzungen und Erweiterungen. Aus ihnen geht im ganzen hervor, dass eine Anzahl von Aufgaben, die mit den "Beziehungen im Betriebe" zusammenhängen, zusammengefasst und auf eine Persönlichkeit übertragen worden sind. Diese Art der Organisation bietet sowohl einen Beweis für die Bedeutung, die den Beziehungen im Betriebe beigemessen wird, wie auch ein Mittel, um dem Faktor Mensch die ihm gebührende Anerkennung in jeder neuen oder veränderten Situation zu sichern.
Wenn ich Ihre Aufmerksamkeit nun auf die punktierte Linie des Schaubildes lenken darf, kann ich Ihnen auf Grund der historischen Entwicklung zeigen, wie man mit Hilfe des funktionellen Organisationssystems zu einer Verbindung zwischen Belegschaft und Leitung gelangt ist. Vor zehn oder zwölf Jahren wurden Personalassistentinnen in unserer Fabrik eingeführt. Wir glaubten, dass es für diese jungen Beamtinnen schwer sein würde, mit Betriebsführern zusammen zu arbeiten und letzteren wurde daher keine Verantwortung für die Arbeit dieser jungen Damen übertragen. Es ergaben sich nun bei verschiedenen Gelegenheiten Konflikte zwischen den mit der Exekutive betrauten Abteilungsleitern und den Facharbeitern für Personalpflege. Zum Beispiel konnte kein Mädchen entlassen werden, ohne dass der Leiter und die Personalassistentin zugestimmt hatten. Der Gang war so, dass der Leiter die Entlassung vorschlug und einen entsprechenden Antrag an das Anstellungsbüro für weibliches Personal sandte. Der Vorschlag wurde der Personalassistentin, die in den von dem betreffenden Abteilungsleiter überwachten Räumen arbeitete, zugeleitet. Es kam dann manchmal vor, dass die Personalassistentin eine andere Auffassung hatte als der Abteilungsleiter, dessen Vorschlag nun unberücksichtigt blieb. Eine solche Situation lag weder im Interesse der Disziplin noch im Interesse der Organisation.

Seit der Einführung des funktionellen Systems hat sich die Situation von

Grund auf geändert. Die Personalassistentin, der die Verantwortung für das Wohl der Mädchen in einer Abteilung obliegt - "Wohl" ist hier im weitesten Sinne zu verstehen - ist jetzt eine funktionelle Assistentin des Leiters und ihm gegenüber in allen Angelegenheiten der persönlichen Disziplin und in allen Fragen ihrer laufenden Arbeit verantwortlich. Alle Vorschläge, die sie zu machen hat, richtet sie unmittelbar an ihn. Wesentlich ist jedoch, dass ihre Vorschläge mit der Betriebspolitik der Firma im Einklang stehen müssen. Es ist daher so eingerichtet, dass sie sich, soweit es sich um die Haltung zu Fragen der allgemeinen Betriebspolitik handelt, an das Anstellungsbüro für Frauen wendet, durch das sie mit der Funktionsleitung für Personalfragen verbunden ist.

Ich gehe jetzt dazu über, die Beziehungen der Belegschaft zur Verwaltung der Personalpolitik zu besprechen. Hier wird die Verwaltung Sache der Führerschaft. Meiner Auffassung nach ist Leitung in erster Reihe Führerschaft. (Management is primarily leadership.) Die Aufgabe des Leiters ist es, zu führen, vorzubereiten, zu planen und zu ordnen. Derjenige, der vorbereitet, Pläne entwirft und anordnet, muss Führer seiner Gruppe sein. Der Leiter hat mit einer Gruppe zu arbeiten und seine Befähigung zur Führung ist von hervorragender Bedeutung. Ohne rechte Führerschaft gleitet die Gruppe von ihrem Führer ab, und es entsteht die unheilvolle Konstellation, die über die ganze Welt hin durch Arbeitskonflikte gekennzeichnet wird. Ich denke nicht an militärische Alleinherrschaft oder militärische Führung. Die Industrie gebraucht denselben Führertypus wie die Wirtschaftsdemokratie. Der demokratische Führer besitzt Ueberzeugungskraft, ist ein Menschenkenner, der Verständnis für Gruppenbewegungen hat und über Erfahrung in der Leitung und Beeinflussung von Gruppen verfügt. Ferner muss er Mut genug besitzen, um seinen eigenen Weg zu gehen und sich nicht auf andere zu verlassen. Wenn er so führt, wird er eine Brücke zwischen der Arbeiterschaft einerseits und dem "Kapital" andererseits schlagen können. Er kann die Arbeiter - unsere Partner in der gemeinsamen Unternehmung, die wir das Werk (business) nennen - dazu bringen, noch mehr Kraft im Interesse des Werkes einzusetzen. Das Ziel dieser Führung ist der volle Einsatz der Mitarbeit am Werk, (is the fullest measure of participation in the business).

Der Beteiligung sind Grenzen gesetzt und wir haben in unserer Firma sehr eingehend über diese Grenzen nachgedacht. Bei der Wahl der Werkmeister geben wir den Gewerkschaftsvertretern oder den Vertrauensmännern im Betrieb eine Stimme. Der Werkmeister wird von der Betriebsleitung ausgewählt, aber ehe er offiziell mit dieser Aufgabe betraut wird, wird der Vorschlag dem Vertrauensmann (shop steward) zur Stellungnahme vorgeschlagen. Der Vertrauensmann weiss vielleicht etwas über den Mann und seinen Charakter, das der Betriebsleitung nicht bekannt ist. Ohne eine Stelle, die die letzte Verantwortung trägt, gibt es aber keine Klarheit oder Entscheidung.

Wir fragen unsere Vertrauensmänner ferner um Rat bei Entlassungen oder Arbeitsverkürzungen. Aber ich bemerke, dass wir nicht die Zustimmung der Vertrauensmänner einholen, wenn die Entlassung eines Arbeiters oder Arbeiterin wegen ungenügender Leistungen erfolgt. Dies wäre unserer Auffassung nach ein Fehler; die Verantwortung für die Leistungsfähigkeit des Betriebes muss bei der

Leitung liegen. Auf dieser Zusammenkunft ist uns schon von einem Vertreter der Arbeiterschaft eine ihm von einer Gewerkschaft zu dieser Frage erteilten Antwort wiedergegeben worden. Im allgemeinen erkennen die Mitglieder des Britischen Gewerkschaftsbundes (British Trade Unionists) an, dass die verantwortliche Aufgabe der Betriebsleitung eben die Leitung ist. In unserer Betriebspraxis tritt das klar zutage. Wenn eine Liste von überzähligen Arbeitern aufgestellt wird, die entlassen werden sollen, weil keine andere Arbeit für sie da ist, so geben wir diese Namen dem Vertrauensmann zur Kenntnis. Er weiss vielleicht etwas über die häuslichen Verhältnisse oder über die Arbeit irgend eines Mannes, was bisher noch nicht vorgebracht worden ist. Er weiss vielleicht auch etwas über die häuslichen Verhältnisse oder über die Leistungen eines anderen Mannes, die nach Ansicht der Belegschaft nicht viel besser sind als die des ersten. Er kann z.B. vorschlagen, dass ein lediger Arbeiter entlassen wird statt eines verheirateten mit mehreren Kindern, vorausgesetzt, dass die Betriebsleitung keine grossen Unterschiede in der Leistung der beiden bemerkt hat. In solchen Fällen macht es der Leitung nicht viel aus, ob der eine oder der andere Mann geht, und die Vorschläge des Vertrauensmannes sind sehr willkommen; gegebenenfalls sichert sich die Betriebsleitung auch die Unterschrift des Vertrauensmannes unter der Entlassungsliste. In solchem Fall hat man den Rat und die Bestätigung der Vertrauensmänner, dass ihre Meinung berücksichtigt worden ist. Grundsätzlich übernimmt jedoch die Leitung die Verantwortung für den Abbau der Belegschaft. In dieser Frage wird der Vertrauensmann, wenn er auch mit der Entlassung einverstanden ist, nicht zur Ueberahme einer Verantwortung aufgefordert.

Es wird zugegeben werden, dass die Befähigung zur Teilnahme an der Leitung einer Unternehmung auf Kenntnissen und Erfahrungen beruht. Wo die Leitung sich wirklich bemüht, die Arbeiter zur Mitwirkung am Erfolg der Unternehmung zu befähigen, muss sie die notwendigen Schritte zur Vermittlung von Wissen und Kenntnissen tun. Unsere Praxis geht dahin, dass der Vorsitzende des Direktoriums der Gesellschaft regelmässig Besprechungen mit dem Zentralbetriebsrat über die Geschäftslage hat - über die Ausdehnung oder den Rückgang des Geschäftes, über die Schwierigkeiten, die zu überwinden sind, und über die Aussichten und Pläne der Gesellschaften. Einmal im Jahre nach der Generalversammlung der Aktionäre wiederholt er vor dem Zentralbetriebsrat und vor einer öffentlichen Versammlung, zu der jedes Mitglied des Stabes Zutritt hat, die Ansprache, die er vor den Aktionären gehalten hat. Zeitweilig, bei besonders dringenden Anlässen rufen wir alle erwachsenen Arbeiter zusammen, damit sie von ihm informiert werden und mit Hilfe eines Mikrophones können tatsächlich gleichzeitig alle verständigt werden.

Informationsmöglichkeiten bietet in unserem Werk ferner das von uns eingeführte Verfahren zur Verteilung von Ueberschuss-Gewinnen, das in engster Zusammenarbeit mit den Gewerkschaften ausgearbeitet worden ist. Es ist ein einzigartiges Gewinnbeteiligungssystem, weil seit seiner Einführung noch keine Gewinne verteilt worden sind. Wir begannen damit in den Depressionsjahren als Ueberschussgewinne, d.h. Gewinne, die nach gewissen Rückstellungen für die Verteilung zur Verfügung stehen, nicht verdient worden waren und als die Rückstände, die sich in jenen Jahren anhäuften, noch nicht ausgeglichen waren. Alle Halbjahre wird der vom Zentralbetriebsrat gewählte Gewinnbetei-

ligungsausschuss vom Vorsitzenden des Direktoriums der Gesellschaft und von dem Finanzleiter zusammengerufen und über den Stand des Geschäftes orientiert. Die Tatsache, dass im Laufe von fünf Jahren alle Halbjahre ein so sorgfältiger Ueberblick über das Geschäft und seine Aussichten gegeben worden ist, hat viel dazu beigetragen, um die Arbeiter über das Geschäft selbst und über die Schwierigkeiten, mit denen es zu kämpfen hat, aufzuklären; sie nehmen im wahrsten Sinne des Wortes an dem Geschäft teil durch weitgehendstes Verständnis für die Wandlungen, die uns aufgezwungen worden sind.

Ich will mit einem Hinweis schliessen auf das, worin sich meiner Ueberzeugung nach das Verantwortungsgefühl des Führers auswirkt, in dem Mut, Dinge zu tun, die bisher noch nicht getan worden sind. Die Betriebsleitung sollte nicht darauf warten, dass Vorschläge von der Arbeiterschaft gemacht werden. Sogar in Lohnfragen ist es den Arbeitern gegenüber nicht richtig, wenn die Leitung, der ein Misstand bekannt ist, mit dem Eingreifen zögert, bis sich irgend jemand beschwert. Das grösste Problem, dem die rationell organisierte Industrie gegenübersteht, ist das Problem der Arbeitslosigkeit. Ich halte daran fest, dass die Inhaber und Leiter der Unternehmungen sich nicht damit begnügen dürfen, die Leute, für die sie keine Arbeit weiter haben, auf den Arbeitsmarkt hinauszutreiben; es ist ihre Pflicht, sich aufs ernsthafteste mit der Frage zu beschäftigen, wie diesen Schwierigkeiten und wie diesem Misstand der Arbeitslosigkeit abgeholfen werden kann. Ich möchte meine Ausführungen durch eine Darstellung dessen verdeutlichen, was bei der Firma Rowntree & Co. Ltd. auf diesem Gebiet getan wird, aber es versteht sich von selbst, dass ich mit Rücksicht auf andere britische Firmen, die zum Teil heute hier vertreten sind, darauf hinweise, dass ähnliche Einrichtungen in einer ganzen Anzahl von Werken geschaffen worden sind.

Wir haben seit mehreren Jahren die Praxis verfolgt, alljährlich einen Betrag zurückzulegen - etwa 1 % der gesamten Lohnkosten oder 10.000 Pfund, (d.h. jeweils den höheren Betrag) -, um die Härten der Entlassung oder der Arbeitsverkürzung zu mildern. Aus diesem Fonds werden Unterstützungsbeträge zur Ergänzung der Staatsunterstützung oder einer kleinen Unterstützung der Gewerkschaften gezahlt. Die Einrichtung kommt allen Arbeitnehmern über 18 Jahre, die sechs Monate hintereinander in der Firma gearbeitet haben, zugute. Bei Entlassungen beträgt die Gesamtunterstützung pro Woche von Staat, Gewerkschaft und Rowntree & Co. Ltd. 50 % des Wochenlohnes für Ledige (Mann oder Frau), zuzügleich 10 % für eine zu unterhaltende Ehefrau und 5 % für jedes Kind unter 16 Jahren, bis zu 75 % des durchschnittlichen Wochenverdienstes. Für jede zwei Monate, die ein Arbeiter regelmässig in der Fabrik gearbeitet hat, hat er Anspruch auf Unterstützung während einer Woche bis zu einer Frist von 2½ Jahren, und eine weitere Woche wird Unterstützung gewährt für jede drei Monate, die er darüber hinaus geleistet hat. Bei Arbeitsverkürzung beträgt die Unterstützung 80 % der obenerwähnten Unterstützungsbeträge.

Da wir gezwungen waren, die Belegschaft weiter einzuschränken, mussten wir auf dieser Linie noch einen Schritt weiter gehen. Wenn es richtig ist, jedes Jahr von den zur Verfügung stehenden Gewinnen eine Summe

von 10.000 Pfund für diese Zwecke zu verwenden, so ist es ebenso logisch wie wirtschaftlich, diese Summe zu kapitalisieren und sie für die Arbeitsbeschaffung für entlassene Leute anzulegen. Das einzige Mittel gegen Beschäftigungslosigkeit ist die Arbeit. Als wir daher zum Schluss des letzten Jahres wieder eine grössere Anzahl Arbeiter zu entlassen hatten, unternahmen wir Schritte, um andere Arbeitgeber zur Einstellung dieser Leute in anderen Arbeitszweigen zu veranlassen. Wir boten ihnen einen Zuschuss von 2 Pfund wöchentlich pro Kopf für den Zeitraum eines Jahres an unter der Bedingung, dass ein Wochenlohn von mindestens 55 Sh. bei einer einigermassen sicheren Aussicht auf dauernde Beschäftigung gezahlt würde, und dass kein Mann entlassen würde, um dafür einen unserer überzähligen Leute einzustellen. Dieses Anerbieten führte zwar nicht zu einer sehr umfangreichen Einstellung von Arbeitern, aber es zeigte uns einen neuen Weg für weitere Massnahmen in dieser Richtung.

Bald nach Beginn dieses Jahres wurde es uns klar, dass eine weitere Anzahl Arbeiter zur Entlassung kommen würde. Es erschien uns aber nicht wünschenswert, eine grössere Anzahl Arbeiter aus York herauszuziehen. Ferner war es weniger wirtschaftlich, eine Zahlung ohne Gegenleistung zu machen, als Kapital zu investieren. Von dem Grundsatz ausgehend, dass das einzige Heilmittel für die Arbeitslosigkeit die Beschaffung anderer Arbeit ist, beschlossen die Direktoren, Kapital in neuen Industrien in York anzulegen. Sie waren davon überzeugt, dass es dem Zug der Entwicklung entspricht, wenn ein Werk, das weniger Arbeiter benötigt, andere Industrien ins Leben ruft, die vermutlich erstarken und eine grössere Anzahl Arbeiter beanspruchen werden. Offensichtlich kommen nur Fabrikationen in Betracht, die erwachsene männliche Arbeiter brauchen, und bei denen die Arbeiten im wesentlichen von Leuten ohne besondere Ausbildung geleistet und wirklich gute Löhne gezahlt werden können.

Wir verwandten sehr viel Mühe darauf, um Fabrikationen zu finden, die diesen Bedingungen entsprachen. Schliesslich wurden drei Betriebsmöglichkeiten mit neuen Arbeitsverfahren bezw. Patenten gefunden und Vorbereitungen von den Direktoren der Firma Rowntree & Co. Ltd., getroffen, um das erforderliche Kapital und die Einrichtung zu beschaffen. Da unsere Firma sich die Mitwirkung der Patentinhaber gesichert hat, so bedarf es keiner weiteren technischen Information. Angesichts der Tatsache, dass es sich um Waren handelt, für die ein wachsender Bedarf besteht, bestehen keine Absatzschwierigkeiten für die Erzeugnisse. Alles spricht dafür, dass die Gesellschaften für absehbare Zeit der Nachfrage nicht entsprechen können werden.

Im ganzen sind drei kleine Fabriken in York errichtet worden. Rowntree & Co. Ltd. besassen eine Fabrik, die während des Krieges als Lagerhaus gekauft worden war und leer stand. Diese ist so umgebaut worden, dass die drei kleinen, oben erwähnten Fabriken dort betrieben werden können. Bisher ist tatsächlich nur eine in Betrieb und beschäftigt dreizehn Leute. Es wird damit gerechnet, dass im Laufe eines Monates auch die beiden anderen in Gang kommen werden, und dass insgesamt sechzig Mann von diesen drei Unternehmungen zum Jahresschluss beschäftigt sein werden. Diese Anzahl wird sich allmählich erheblich steigern und in dem Masse, in dem sich der Absatz vergrössert, werden wir uns bemühen, immer höhere Löhne zu zahlen.

Zum Schluss möchte ich betonen: Wenn wir den menschlichen Beziehungen in der Industrie den ihnen gebührenden Platz in einer rationell organisierten Industrie einräumen wollen, so müssen wir unsere Organisation so aufbauen, dass die Probleme dieser Beziehungen die erforderliche Berücksichtigung finden. Das bedeutet, dass wir Verantwortungen übernehmen müssen, die über das hinausgehen, was viele Firmen heutzutage für annehmbar halten. Das wird Geld kosten und Mühe und bedarf unserer ganzen Ueberlegung und Gewissenhaftigkeit. Und wenn wir Aufbauprogramme für solche Gebiete wie Entlassung und Beschäftigung aufstellen, so werden wir unseren in Arbeitsgemeinschaft verbundenen Partnern in der Industrie und in der Welt zeigen, **dass wir die Arbeiterfrage als einen wesentlichen Bestandteil des ganzen Wirtschaftslebens ansehen.**

AUSWAHL, AUSBILDUNG UND AUFSTIEG VON ARBEITNEHMERN

VON MISS THYRA SMITH, PSYCHOLOGISCHE ASSISTENTIN BEI DER FIRMA ROWNTREE & Co., LTD., YORK, ENGLAND.

Die Anwendung betriebswissenschaftlicher Grundsätze in der Industrie hat dazu geführt, dass grössere Anforderungen an die Arbeiter gestellt werden. Die Arbeiter bezw. die Arbeiterin stellt an sich selbst höhere Anforderungen und der Betrieb erwartet mehr von ihnen als früher. Darum wird grösster Wert darauf gelegt, dass der Arbeiter für seine Arbeit geeignet ist, und dass Handhaben gewonnen werden, mittels deren man nachprüfen kann, ob die Menschen die erforderliche Befähigung für die ihnen zugewiesene Arbeit besitzen.

Ebenso wichtig ist es natürlich, dass die Persönlichkeit, die mit der Auswahl betraut ist, das Rezept an sich selbst ausprobiert. Sie muss Eignung und Können für die Erfüllung dieser Aufgabe besitzen. Diese Eignung beruht auf der Fähigkeit - um den technischen Ausdruck zu gebrauchen - "rasch in Kontakt mit der Versuchsperson zu kommen" und schnell eine Verständigung herzustellen, sodass die Versuchsperson, die sich um eine Anstellung bewirbt, instande ist, während der Prüfung ihr Bestes zu leisten. Die Persönlichkeit, die die Prüfung leitet, muss ferner für ihre Aufgabe geschult sein, und vor allen Dingen in der experimentellen und in der klinischen Psychologie Uebung besitzen. Unter Schulung verstehe ich hinreichende praktische Betätigung in einem Arbeitskreis, der ein Vergleichen der eigenen Arbeitsergebnisse mit denen erfahrener Berufsgenossen und eine Nachprüfung der Richtigkeit dieser Ergebnisse gestattet. Ohne eine solche Vorbildung ist niemand fähig, die Verantwortung für die Auslese von Kräften zu übernehmen.

Dann muss die betreffende Persönlichkeit in eine Fabrik gehen und, meiner Ansicht nach, dort bleiben. Ich glaube nicht, dass gute Arbeit innerhalb mehrerer Monate geleistet werden kann, denn Auswahl, Ausbildung und Aufstieg - alles hängt zusammen. Die Verantwortung liegt in allen Fällen bei der gleichen Persönlichkeit, und darum muss sie bei der Arbeit bleiben und möglichst mitten im Betriebe stehen.

Man fängt damit an, durch die Räume zu gehen, die Arbeiten zu beachten, selbst eine Zeit lang mitzuarbeiten, um die Anforderungen, die an die einzelnen Arbeiter gestellt werden, kennen zu lernen, um beurteilen zu können, was es heisst, so bei der Arbeit zu bleiben, wie es der Arbeiter tun muss; um die Ermüdung, die Anspannung, die Befriedigung und die Aussichten, die mit einer Arbeit verbunden sind, selbst kennen zu lernen. Dann müssen sie die geeigneten Teste ausarbeiten oder, wenn möglich, passende Teste heranziehen und Masstäbe für die Prüfungsaufgaben aufstellen. Das heisst, sie müssen ihre eigenen Teste unter dem Gesichtspunkt eines Testes auswerten. Zu diesem Zweck muss man wieder zurück in die Schulen. Man muss mit einer ganzen Reihe von Leuten zusammenarbeiten, die man bei der Arbeit in den Fabrikräumen kennen gelernt hat - und dabei wird das gegenseitige Vertrauen hergestellt. Nur müssen die entsprechenden statistischen Berechnungen vorgenommen werden, um die allgemeine Verwertbarkeit der Teste und ihre Brauchbarkeit für die

Prüfung besonderer Fähigkeiten und für die Messung des Grades dieser Fähigkeiten festzustellen.

Wahrscheinlich wird man feststellen, dass zwei Arten von Prüfungsmethoden notwendig sind, nämlich Arbeitsproben und schriftliche Tests, denn das Werk wird verlangen - damit der Nutzen der Prüfung ersichtlich wird -, dass die Tests von oben nach unten oder von unten nach oben beliebig anwendbar sind. Was dem Einen recht ist, ist dem Andern billig.

Wir haben festgestellt, dass unsere schriftlichen Teste auch Durchstreichteste zur Prüfung der Beobachtungsfähigkeit und der Beobachtungstreue umfassen müssen, ebenso Substitutionstests, die uns einen Beweis für ein schnelles Gedächtnis geben. Anweisungstests, die die Fähigkeit des Prüflings, Befehle zu verstehen und auszuführen, zeigen, Associationtests, die nach Dr. Cyril Burt in London Initiative beweisen. Nach unseren Erfahrungen müssen wir diese Theorie stützen. Wir brauchen auch einen Test zur Feststellung der allgemeinen Bildung, das heisst der Aufnahmefähigkeit eines lebendigen Menschen für Dinge des täglichen Lebens, in einen Wort - ich zögere dieses Wort auszusprechen, weil ich auf die Definition nicht vorbereitet war - eine Art allgemeine Intelligenzprobe.

Bei der Arbeitsprobe kommt es im wesentlichen darauf an, Beweise zu gewinnen für die Fähigkeit des Prüflings, eine einfache Aufgabe zu lösen, das Arbeitsmaterial seinen Bedürfnissen und den Bedürfnissen der Arbeit anzupassen.

Dann nehmen wir die Reaktionszeiten, und zwar sowohl bei einfachen Reaktionen auf visuelle Reize (Lichteindrücke), als auch auf geistige Reaktionen (Unterscheidungsvermögen für Farben). Schliesslich bleibt noch die Kontrolle der Reaktionen auf motorische Reize, das heisst, es ist zu ermitteln, wieweit unsere Hände ausführen können, was unser Gehirn ihnen befiehlt.

Bei der Anwendung dieser Teste kann man die schriftlichen Prüfungen gruppenweise vornehmen. Auf die Grösse der Gruppe kommt es nicht an. Leistungsproben nehmen wir in Gruppen von sechs Personen vor, und zwar aus zwei Gründen. Die Prüflinge sind in besserer Stimmung, wenn sie in Gruppen geprüft werden. Wenn die Prüflinge Schulkinder sind, sehen sie die ganze Sache als ein Spiel an. Aeltere eifern sich gegenseitig an. Wir erreichen es so viel leichter, dass sie sich wohl fühlen, denn man kann nicht richtig prüfen, wenn dies nicht gelingt; man sollte sogar das Prüfen lassen, bis man sie so weit hat.

Nur wenige Teste können von dem geschulten Prüfungsleiter allein mit dem Prüfling vorgenommen werden. Es handelt sich um den praktischen Test der Arbeitsplanung; wenn da ein Prüfling den anderen beobachtet, kann man diesen nicht mehr prüfen, weil er es dem ersten nachmacht.

Nachdem wir Tests gefunden hatten, setzten wir für die Leistungen unserer Arbeiter gewisse Rangwerte (standards) fest. Für eine gegebene Arbeit bildeten wir eine Gruppe von nicht weniger als 30 Personen, die wir folgendermassen zusammensetzten: 5 Arbeiter, die sich besonders ausgezeichnet hatten und nach Ansicht ihrer Arbeitsgenossen und Werkmeister hervorragend gute Arbeit lieferten und deren Leistungen über die durchschnittliche Arbeit hinausgeht - kurz eine "Spitzengruppe". Eine Gruppe von 30 Durchschnittsarbeitern mit zufriedenstellenden Leis-

tungen, die das Arbeitspensum zu 100 % erreichten, und deren Arbeitsprodukte von der Kontrolle nicht beanstandet wurden. 5 nicht so gute Arbeiter, denen es schwer wurde, das verlangte Arbeitspensum zu leisten und deren Arbeit häufiger von der Kontrolle zurückgegeben wurde, weil sie mangelhaft war. Wir nahmen Schätzungen der Leistungen dieser Leute auf Grund von Urteilen der Werkmeister und Werkstattaufseher vor. Darnach prüften wir die Leute mit dem eben geschriebenen Test, verglichen die Ergebnisse und fanden in ihrer Uebereinstimmung den Beweis für die Brauchbarkeit der Leistungsprobe. So gewannen wir unsere Grundlagen und wir brauchten fast drei Jahre, um ausreichendes Material zusammen zu tragen.

Mit hilfe dieser Teste stellten wir Jugendliche ein. Jeder Junge und jedes Mädchen, alle Männer und Frauen, die bei Rowntree & Co. Arbeit suchen, werden auf diese Weise geprüft und es wird ihnen dann eine bestimmte Arbeit zugewiesen.

Nun komme ich zur Ausbildung. Wir haben in den einzelnen Abteilungen (shop) kleine Gruppen von Facharbeitern gebildet, die erwiesenermassen Begabung zum Anlernen haben. Ich glaube, ich brauche nicht zu sagen, dass fachliches Können und die Befähigung zum Anlernen zwei verschiedene Dinge sind. Wir haben darum Leute ausgewählt, deren Fachkönnen ausser Zweifel steht, und die es verstehen, Arbeitskollegen anzulernen. Wir lassen unsere jungen Leuten unter diesen Anlernern (trainers) arbeiten und beobachten sie: wöchentlich, täglich, manchmal stündlich, damit wir ihnen helfen können, sich in ihrer Arbeit Fertigkeiten anzueignen; wir vermerken ihre Fortschritte jede Woche, sodass sie selbst beurteilen können, ob sie jedesmal etwas weiter gekommen sind, und wenn nicht, warum nicht. Wir sprechen mit ihnen darüber. Diese Beobachtung ist gleichzeitig eine Nachprüfung unserer Tests. Bewähren sie sich? Müssen sie abgeändert werden? Sind die Massstäbe gesund und gerecht?

Hieraus erwächst ein anderer Zweig der mit der Auswahl zusammenhängenden Arbeit, nämlich die Förderung des Aufstieges. Bei Rowntree & Co. pflegt man die leitenden Posten aus der Belegschaft im Wege des Aufstieges zu besetzen. Die Posten werden in den Abteilungen ausgeschrieben, das Personal bewirbt sich darum und wir verlangen hier wieder ein gewisses Niveau, das auf Grund unserer Erfahrungen die wünschenswerte Vorbedingung für den Aufstieg bildet. Die Beratung in diesen Fragen erfolgt durch die psychologische Abteilung.

Zum Schluss möchte ich noch zwei Bemerkungen machen: erstens über die Stellung der Arbeiter zu diesen Fragen, auf Grund der Aeusserungen, die ich von ihnen während unseres Zusammenarbeitens gehört habe, und zweitens über die Frage, macht sich die Arbeit bezahlt?

Die Arbeiter sagen jetzt oft "darüber sind wir uns klar, es geht gerecht zu. Wir werden nach unseren Leistungen beurteilt". Bezüglich der Auffassung der Betriebsverwaltung darf ich mit Erlaubnis von Dr. Northcott mitteilen, dass sehr genaue Ermittlungen über den Wert der psychologischen Abteilung, die Anfang dieses Jahres angestellt worden sind, zu dem Ergebnis geführt haben, dass die Abteilung, die zwei fachlich vorgebildete Psychologen, einen Ingenieur als Mitarbeiter bei Bewegungsstudien und vier Bürogehilfen mit erheblichem Kostenaufwand beschäftigt, sich nach genauer Abschätzung der erzielten Ersparnisse mehrfach bezahlt gemacht hat.

DER URQUELL DER PRODUKTIVITÄT VON H. DUBREUIL, SEKRETÄR DES ALLGEMEINEN ARBEITERBUNDES IN PARIS.

Nachdem ich Ihren Verhandlungen beigewohnt und versucht habe, Ihre Ziele zu verstehen und nachdem ich zwei Ihrer wichtigsten Aufgaben kennen gelernt habe, möchte ich einmal versuchen, die grosse Linie der gemeinsamen Bestrebungen aufzuzeigen.
Mr. Urwick hat gesagt, dass alle Versuche zur Rationalisierung der Arbeit auf den berühmten alten Spruch zurückgehen: "Erst Leben". Aber alle, die neuen Lebensinhalten in der Arbeit zur Gestaltung verhelfen wollen, beziehen sich auf einen anderen weisen Spruch: "Der Mensch lebt nicht von Brot allein".
So erscheint unser Ziel, dessen Einheit in der Gemeinsamkeit unserer Bestrebungen zum Ausdruck kommt, zugleich als ein wirtschaftliches und als ein sittliches: wir wollen gemeinsam zu den Quellen der Produktivität und der Lebensfreude vordringen.

Nach den ersten Versuchen und Erfolgen der wissenschaftlichen Betriebsführung hat man versucht, uns mit dem Hinweis auf die Wirkungen des Systems für das Seelenleben des Arbeiters und mit der angeblichen Gefahr der Ertötung des geistigen Fähigkeiten zu schrecken.
Dieser Vorwurf wäre ernst zu nehmen, wenn wir ihn nicht durch Tatsachen aus dem Wirtschaftsleben widerlegen könnten. Aber es gibt zahlreiche Beweise dafür, dass trotz der Evolution der modernen Arbeitsmethoden die Intelligenz des Arbeiters noch so rege ist, dass wir grosse Hoffnungen für die Wirklichkeit von Morgen daran knüpfen können. Ich möchte kurz zwei verschiedene Beispiele aus gleichfalls verschiedenen Gebieten erwähnen.
Ich nenne zuerst die Ford-Werke, die zweifellos zu den am stärksten mechanisierten Betrieben gehören, und bei denen man daher ein erhebliches Herabsinken der geistigen Fähigkeiten der Arbeiter erwarten dürfte.
Ich habe dort gerade in der Zeit des Ueberganges von der Fabrikation des alten Modells zum neuen Typus des Fords-Wagens gearbeitet; alle, die das Leben in solchen Betrieben aus Erfahrung kennen, wissen, wie die Dinge in einem derartigen Fall stehen. Trotz sorgfältigster Vorarbeiten in den Büros, trotz der besten Arbeitsplanung kann man nicht verhindern, dass sich bei der Verwirklichung der neuen Projekte unvorhergesehene Schwierigkeiten einstellen. Es setzt dann ein intensives Nachforschen und Probieren ein, das unter dem Druck unliebsamer Verzögerungen alles zu fieberhafter Suche nach der Ursache der Störung antreibt. Ingenieur und Belegschaft arbeiten mit gleichem Feuereifer, von dem Wunsch beseelt, das Hindernis zu überwinden, mit dem die Theorie nicht gerechnet hatte. In einem solchen Moment - gerade als eine Stockung im Produktionsprozess drohte - fand ein Arbeiter plötzlich die Lösung, um die sich alle vergeblich bemüht hatten, und brachte sie in so einfacher und praktischer Form vor, dass sie sofort angewandt werden konnte. Die Flamme der Intelligenz brach gerade an der Stelle hervor, wo die Maschine sie zu ersticken drohte.
Mein zweites Beispiel stammt aus einer ganz anderen Sphäre, aus einer rumänischen Spinnerei, in der die Belegschaft aus einer primitiven bäuerlichen Bevölkerung stammt, die mit der westlichen Kultur kaum in Be-

rührung gekommen ist. Die Bauern waren plötzlich in das Fabrikleben hineingezogen worden und können, da sie keine fachliche Vorbildung besitzen, nur mit einfachen, sich immer wiederholenden Arbeiten - wie sie für die heutige Massenproduktion charakteristisch sind - beschäftigt werden.
Nun erfand ein junger Bauer, dessen einzige Beschäftigung darin bestand, Bindfäden an die beiden Enden der von der Maschine aufgerollten Stoffballen zu befestigen, eine Vorrichtung, durch die seine Tätigkeit wesentlich vereinfacht und seine Leistungen um 30 bis 40 % erhöht wurden.

Selbstverständlich haben wir keinen Grund, uns mit den gegenwärtigen Bedingungen zufrieden zu geben. Wir sind hier vereint durch den Willen zu höheren Lebensformen, zu einer gesteigerten Produktivität, die den Aufgaben der modernen Demokratie gerecht wird und zu einer Harmonie der menschlichen Beziehungen, wie sie unsere Gesellschaftsordnung bisher noch nicht erreicht hat.
Um zu unserem Ziel zu gelangen, sollten wir uns der Vorteile der wissenschaftlichen Methoden bedienen und sie vor allem auf das Studium der Geschichte der menschlichen Arbeit anwenden. Wir sollten z.B. den Ursachen der Produktivität der Handarbeit von der Antike bis zur Gegenwart nachforschen. Wir wissen, dass der Arbeiter in heutiger Zeit viel mehr produziert als der Sklave des Altertums. Der Hörige des Mittelalters lebte bereits unter milderen Bedingungen als der Sklave und seine Arbeit war entsprechend besser. An der Hand solcher Untersuchungen werden wir zweifellos feststellen können, dass die Produktivität der Arbeit sich in dem Masse gesteigert hat, in dem es dem Arbeiter gelungen ist, eine höhere soziale Stufe zu erreichen.

Sollten wir nicht früheren Versuchen zur Herbeiführung eines besseren Arbeitsvertrages und besserer menschlicher Beziehungen mehr Aufmerksamkeit zuwenden?
Warum sind z.B. die Versuche von Robert Owen[1] und Godin in Vergessenheit geraten? Diese Männer haben Lösungen gesucht, um die wir uns heute noch mühen. Ihre Versuche sind zweifellos gescheitert, aber die Darstellung ihrer Arbeit und das Studium der Ursachen ihres Scheiterns würde uns wertvolle Fingerzeige geben. Ebenso wertvoll würden Studien über Versuche sein, die gegenwärtig von englischen und amerikanischen Unternehmungen auf dem Gebiete der industriellen Selbstverwaltung gemacht werden.
Bei der Beschäftigung mit diesem Problem darf man natürlich nicht die von den Arbeitern im Rahmen ihrer Organisationen ausgehenden Bestrebungen vergessen. Der Arbeiter organisiert sich in seiner Fabrik mit den Arbeitsgenossen seiner Umgebung, um gewisse nächstliegende Zwecke zu erreichen. Sein Blickfeld ist zweifellos begrenzt, aber aus der Mitte dieser Organisationen ragen Einzelpersönlichkeiten hervor, die eingesehen haben, dass der Werkstatt-Standpunkt oft zu eng ist, und dass man in gewissen Fragen über den eigenen Zaun blicken muss. Die Geschichte der Arbeiterorganisationen bietet den besten Beweis für die Erweiterung ihres

[1] Das Werk von Dr. Helene Simon "Robert Owen", Fischer-Jena 1910 bringt eine Würdigung der Persönlichkeit Robert Owen's und seines Werkes und eine sehr eingehende Darstellung seiner Ideen und Reformen.

Gesichtskreises. Die erste Geste des Arbeiters in der Werkstatt ist oft nur ein Reflex und ein negativer Akt, eine elementare Form der Verteidigung. Aber in dem Masse, wie sich sein Blick über schwierige Erfahrungen hinweg weitet, kommt er allmählich aus seiner negativen und passiven Stellung zur Aktivität und positiven Haltung, die heute sehr deutlich in den Vorschlägen für die Mitwirkung der Arbeiter in der Verwaltung der Betriebe zum Ausdruck kommt.

Auch hier kann uns die Geschichte lehren und helfen. Als z.B. die Armee der französischen Revolution im Jahre 1792 ihrer Führer infolge der Massen-Auswanderung des Adels beraubt war, überliess man es bekanntlich den Soldaten, sich die Führer selbst zu wählen, die das Heer in Ordnung halten und zum Siege führen konnten. Es ist bekannt, dass diese Armee in der Verteidigung Höchstleistungen vollbrachte, und dass ein grosser Führer der Zeit, der General Gouvin Saint Cyr, bestätigte, dass die Mehrzahl der von den Soldaten vorgenommenen Wahlen ausgezeichnet gewesen wäre.

Ich wage zu behaupten, dass wir in Zukunft damit rechnen können, dass die Hoche und Marceau der Arbeit als bedeutende Führer der Industrie aus den Reihen der Arbeiterschaft hervorgehen können. Einzelne hervorragende Beispiele kennen wir bereits heute als glänzende Ausnahmen. Wenn wir genügend Weitblick haben, wird ihr Aufstieg morgen die Regel sein.

Wir wollen zum Kern des Problems vordringen. Könnten wir nicht auch einen Vergleich der verschiedenen Einstellungen zur Arbeit anstellen? Nach Beispielen, die wir täglich vor Augen haben? Wir haben gesehen, dass die Sklavenarbeit die niedrigste Form der Arbeit darstellt. Welches ist die höchste Form? Ich wage zu sagen: Die Arbeit des Künstlers. Dürfen wir ihn nicht als Arbeiter höherer Art ansehen, der an seinem Werk mit einer Hingabe schafft, die ihn die Zeit oft ganz vergessen lässt. So angesehen erscheint der Künstler als der höchste Ausdruck des werkschaffenden Menschen.

Aber er gibt uns nicht allein in der heutigen Gesellschaft das Beispiel glühenden Arbeitseifers. Der Bauer, der von Sonnenaufgang bis Sonnenuntergang arbeitet und seinen Sinn nicht von der Erde wendet, wird gleichfalls nicht durch jenen Zeitbegriff gelähmt, der den Industriearbeiter dazu treibt, immer wieder auf die schleichende Uhr zu sehen. Und wird dem Arbeiter nicht oft das Beispiel des Arbeitgebers vorgehalten, der abends nach zehn Uhr noch über seinen Büchern sitzt, wenn er schon längst nicht mehr an die Werkstatt denkt?

Warum kennen Künstler, Bauer, Arbeitgeber und ich selbst - während ich so zu Ihnen spreche - diesen Zeitbegriff nicht, und warum bieten sie ihre ganze Kraft auf, um eine bestimmte Leistung zu vollbringen?

Wohl doch einfach, weil sie von inneren spontanen Antrieben geleitet werden?

Und denken Sie jetzt einmal an die schwächlichen Mittel, die man anwendet, um Menschen einzuspannen, die ohne die Gnade dieser inneren Triebkräfte arbeiten müssen. Sie werden dann begreifen, dass die Revolution der Arbeit darin bestehen muss, die äusseren Druckmittel - so vollkommen sie auch sein mögen - durch die inneren Kräfte zu ersetzen, die jedes menschliche Wesen in sich trägt. Die eigentliche Lösung des Arbeitsproblems besteht darin, das Mittel

zur Freimachung dieser inneren Triebkräfte zu finden, die uns alle bewegen und in den Menschen, die uns das Beispiel fruchtbarster Arbeit bieten, als unbezwingbarer Schaffensdrang wirken. Alles, was Natur und Leben an Kraft und Schönheit bieten, wird von inneren Kräften beseelt, deren Gesetzmässigkeit uns freilich nicht immer erkennbar ist.

Es wird ein Tag kommen, an dem man mit Verwunderung auf die Leistungen herabsehen wird, auf die wir jetzt so stolz sind, in unseren Bemühungen etwas Ordnung in die Arbeitsbeziehungen hinein zu bringen. Dann wird man verstehen, dass die betriebswissenschaftlichen Methoden von heute nur die Anwendung von Uebergangsmassnahmen darstellen zwischen dem Chaos und dem Arbeitsleid der Vergangenheit und der Ordnung und Harmonie der Zukunft. Das erste Mittel zum Antrieb von aussen war die Peitsche. Heutzutage stellt man eine Fülle von eingehenden Untersuchungen über die Arbeitsplanung an, aber im Grundprinzip ist nichts geändert worden. Und wenn wir vorwärts wollen, müssen wir das Grundprinzip ändern.
Wir müssen also nach den letzten Quellen lebendiger Tätigkeit forschen und gleichzeitig nach den Gesetzen der Harmonie der menschlichen Arbeit. Und hier sehen wir die Bemühungen um Verwirklichung der rationellen Arbeitsorganisationen, das heisst um eine Harmonie in der äusseren Ordnung der Dinge in gleicher Richtung gehen mit den Bestrebungen um Schaffung besserer Beziehungen zwischen den Menschen, das heisst um eine sittliche Ordnung.
Dieses Ziel eint uns alle im gemeinsamen Streben; wir dürfen die Hoffnung hegen, dass ein Newton kommen wird, der das Gesetz entdeckt, nach dem wir suchen. Und ich möchte Sie bitten, im Geist einen Gedanken unseres Jaurès zu bewahren, der einmal gesagt hat, dass geeintes Streben die Macht des Genies zu ersetzen vermag. (Que l'harmonie des efforts pouvait suppléer à la puissance du génie.) Diese Worte mögen uns leiten und stützen. Mit verbundenen Kräften dürfen wir hoffen, auf rechtmässigem Wege eines Tages zu jenem Frieden der Arbeit zu gelangen, den so viele edle Menschen bisher vergebens gesucht haben.

DIE RATIONELLE ORGANISATION ALS ELEMENT IN DER ENTWICKLUNG DES WIRTSCHAFTSLEBENS

VON H. PAUWELS, GENERALSEKRETÄR DES CHRISTLICHEN GEWERKSCHAFTSBUNDES IN BELGIEN, BRÜSSEL.

In Anbetracht der kurzen Zeit, die mir zur Verfügung steht, kann ich weder über die Daseinsberechtigung, die Arbeitsmethoden noch über das Ziel der syndikalistischen Organisation (Organisation der Syndikate) sprechen. Ich muss mich auf die Tätigkeit der syndikalistischen Bewegung in Bezug auf Fragen der Rationalisierung beschränken.

Die Syndikate bilden heute, als Ganzes gesehen, eine der aufbauenden Teile des wirtschaftlichen Lebens. Folglich muss bei der wirtschaftlichen Entwicklung, vor allem aber bei der Rationalisierung auf das positive Moment hingewiesen werden, das die syndikalistische Bewegung bedeutet.

Uebrigens ist es interessant festzustellen, dass sich alle Syndikate für rationelle und wissenschaftliche Produktionsmethoden ausgesprochen haben. Alle vertreten die Ansicht, dass man - um den wirtschaftlichen Fortschritt zu erleichtern - bemüht sein müsse, Kräfte bei der Produktion zu sparen.

Obwohl die Syndikate sich zu Gunsten rationellerer Produktionsmethoden ausgesprochen haben, verfehlen sie nicht, die Aufmerksamkeit auf die Nachteile hinzulenken, die für die Arbeiterschaft aus diesen Methoden entstehen könnten. Diese Nachteile sind vielleicht nur im Augenblick vorhanden, immerhin besteht aber Grund zu fürchten, dass sie von ziemlich langer Dauer und andererseits in ziemlich grossem Umfange sein werden.

Obwohl die Syndikate sich stets - wie sie dies auch in den wirtschaftlichen Konferenzen von Genua 1922 und von Genf 1927 taten - für organisierte Sparsamkeit ausgesprochen haben unterliessen sie es zugleich nie ernsthaft Massnahmen zu verlangen, die die Nachteile der Rationalisierung in möglichst grossem Masse mildern sollten. Wir werden gleich darauf zurückkommen.

Die Syndikate können sich nicht mit einer dauernden Steigerung der Gewinne einverstanden erklären, wenn diese nicht zum Teil in gerechter Weise den Arbeitern zu Gute kommen, die dazu beigetragen haben sie zu schaffen. Es muss also auf eine gerechtere Verteilung des wirtschaftlichen Einkommens Rücksicht genommen werden. Es wäre ausserdem nicht nur unwirtschaftlich, sondern auch unsozial, wenn auch weiterhin die Masse der Arbeiter sich so gestellt sähe, dass der Teil des wirtschaftlichen Ertrags, der ihnen zusteht nicht in genügendem Masse zunimmt, während der Teil, der dem Kapital zufliesst sich in beträchtlicherem Verhältnis vermehrt. Im Uebrigen ist das wirtschaftliche Gedeihen so eng mit der Entwicklung des Lebensniveaus der Massen verknüpft, dass eine rationellere Verteilung des gewerblichen Einkommens als zwingende wirtschaftliche Notwendigkeit betrachtet werden muss.

Die Verbesserung des Lebensstandard der Arbeiterklasse, die man von der Rationalisierung erwartet, kann entweder durch Herabsetzung der Preise oder durch Erhöhung der Löhne und Gehälter erreicht werden. Es ist auch leicht möglich, dass bald eine Verminderung der Arbeitszeit erreicht wird.

Wenn man sich auf den Standpunkt erhöhter wirtschaftlicher Tätigkeit

stellt, so kann man sagen, dass Erhöhung der Löhne und Gehälter der Herabsetzung der Preise vorzuziehen ist, denn es ist eine wohlbekannte Erscheinung, dass Herabsetzung der Preise, ein Nachlassen der Geschäfte hervorruft, da auf weitere Herabsetzung gewartet wird; die Folge ist eine entsprechende Verringerung der wirtschaftlichen Aktivität, während umgekehrt Erhöhung der Löhne und Gehälter sofort einen grösseren Verbrauch und infolgedessen intensivere Produktion nach sich zieht.
Auf jeden Fall muss die Rationalisierung zu einer merkbaren Verbesserung des Lebensniveaus der Arbeiter führen und die Syndikate werden daher nicht verfehlen sich dieser Methode zu bedienen.

Ein weiterer Punkt, der die Syndikate stark beschäftigt, ist die finanzielle Konzentrierung. Es lässt sich nicht bestreiten, dass das nationale Einkommen in vielen Ländern merklich zugenommen hat, während andererseits die Reichtümer selbst anscheinend stärker verteilt sind als früher. Und trotzdem stellt man fest, dass sich die wachsende finanzielle Macht in wenigen Händen ansammelt. In allen Ländern haben die Banken heute bedeutenden Einfluss. Es ist ausserdem wohlbekannt, dass sie sich heute nicht auf eine einfache Finanztätigkeit beschränken, sondern dass sie ihre Unternehmungen mehr und mehr auf wirtschaftliches Gebiet ausdehnen. Es gibt kein industrielles oder kaufmännisches Unternehmen, mit dem Banken zu tun haben, ohne dass diese die Bedingung stellen im Vorstande vertreten zu sein, um eine Kontrolle ausüben zu können.
Das Problem der finanziellen Konzentration erscheint umso schwerwiegender, als die grossen Bankunternehmen unter anderem einen sehr starken Einfluss auf die Staatsmaschine haben, so stark, dass das Allgemeinwohl zu Gunsten der Finanz benachteiligt werden kann.
Trotzdem ist es im Augenblick noch ziemlich schwer, sich Rechenschaft zu geben über die Folgen der Rationalisierung für die Lebensbedingungen des Arbeiters. Tatsachen fehlen uns, sie sind auch schwer festzustellen, denn hierzu wären Untersuchungen von rein wissenschaftlichem Charakter nötig, die sehr langwierig wären und sehr sorgfältig sein müssten. Die Syndikate beschäftigen sich damit, aber es wird noch lange dauern bis die Untersuchungen genügend sichere Resultate zeitigen, um Folgerungen zuzulassen, die einer wissenschaftlichen Kritik standhalten.

Man hat viel vom psychologischen Problem gesprochen. Man befürchtet, dass durch die fortschreitende ausserordentliche Mechanisierung der Industrie, die in immer stärkerem Masse den Menschen zu einem Teil der Maschine macht, der Arbeiter sich in seiner Würde herabgesetzt sieht und sich nicht mehr in genügendem Masse seine gesellschaftliche, geistige und moralische Entwicklung und um den wirtschaftlichen und sozialen Wert seiner Arbeit kümmert.
Die syndikalistische Bewegung beschäftigt sich umsomehr mit dieser Frage, als sie sich von Anfang an darum bemüht hat das Gefühl der Würde bei der Arbeiterschaft zu entwickeln, da die Ausbildung dieses Gefühls eine der grundlegenden bildenden Elemente der syndikalistischen Tätigkeit ist.
Die Syndikate erstreben eine industrielle Demokratie. Voraussetzung hierzu ist die Einordnung der organisierten Arbeiterschaft in die Leitung des wirtschaftlichen, politischen und sozialen Lebens.

Es ist unmöglich dieses Ideal ohne eine Arbeiterklasse zu verwirklichen,

die sich ihrer Würde, ihrer Verantwortung und der gebotenen Möglichkeiten bewusst ist.

Jedes Mal wenn von Rationalisierung die Rede ist, wird das Problem der Arbeitslosigkeit lang und breit behandelt. Die Syndikate stellen fest, dass in den rationalisierten Ländern die Arbeitslosigkeit sich in einem Masse verschärft hat, die ziemlich genau der Entwicklung der Rationalisierung entspricht und andererseits die Arbeitslosigkeit sich auch in der Folgen nicht so verringert hat, wie die Fürsprecher der Rationalisierungsbestrebungen vorausgesagt hatten. Hier tauchen verschiedene Fragen auf, vor allem die der Arbeitslosenversicherung und der Umschichtung der Arbeiterschaft, mit anderen Worten die Wanderung der Arbeiter, Wanderungen auf dem Kontinent und Abwanderungen nach Uebersee.

Die Syndikate sind der Ansicht dass eine gewisse Berufsumschulung ins Auge gefasst werden könnte. Die Veränderung gewisser Industrieen ist so gross, dass die Zahl der Arbeiter, die sie brauchen, sich ständig verringert, Arbeiter die auf diese Weise frei geworden sind, müssen sich andererorts lohnende Arbeit suchen. Die ganze Frage ist umso ernster, als eine der hauptsächlichsten Folgen der Rationalisierung gerade darin besteht soweit als möglich ohne Arbeiterschaft auszukommen.

Wir haben oben von dem Einfluss der grossen Unternehmen und der Bankkonzerne auf das Staatsleben gesprochen. Es ist aber wesentlich, dass dieses Staatsleben nicht verschwindet, denn seine Daseinsberechtigung besteht vor allem darin das Allgemeinwohl zu sichern. Man sucht immer noch Wege, wie der Staat die Interessen der Allgemeinheit am Besten gegen diese Vertrustung schützen kann. Man hat bekanntlich in Deutschland eine Einrichtung ins Auge gefasst, die die Preise festsetzen soll. Die Preise die durch diese Stelle festgesetzt werden, sind Maximalpreise, die nicht überschritten werden dürfen.

Ein zweites Mittel besteht darin, dass alle Geschäfte der grossen Wirtschaftsunternehmen und Banken veröffentlicht werden müssen.

Staatsaufsicht ist wünschenswert und es ist wohl denkbar, dass der Tag kommen wird an dem die internationalen Kartelle sich eine gewisse Aufsicht von seiten des Völkerbundes gefallen lassen müssen.

Für die Arbeiterschaft wird es immer schwieriger eine Kontrolle über die Unternehmen anders durchzuführen als durch die syndikalistischen Organisationen. Um eine Aufsicht seitens der Arbeiterschaft zu erreichen, haben Manche die Beteiligung der Arbeiterschaft vorgeschlagen, andere den Aktienbesitz des Einzelnen, und andere wieder Betriebsräte verlangt, wie in Deutschland.

Wir glauben, dass das beste System immer noch in der unmittelbaren Beteiligung der syndikalistischen Organisationen an der Leitung des Wirtschaftslebens und bei der Zusammenfassung der Unternehmen besteht. Man kann wohl hoffen, dass dieser Wunsch in Erfüllung geht, sobald die Arbeiterschaft sich ihrer Verantwortung und der grossen Möglichkeiten, die in der Auswertung der syndikalistischen Bewegung liegen, bewusst wird.

Das Hauptziel der I. R. I. besteht darin zu untersuchen auf welche Weise menschliche und friedliche Beziehungen in der Industrie hergestellt werden können. Im Grunde verfolgen die Syndikate dasselbe Ziel. Die syndikalistische Bewegung sucht heute den wirtschaftlichen Frieden.

Als Syndikalisten hoffen wir, dass die I. R. I. ihre Aktion mit dem grösst

möglichen Erfolge weiterführe und ihr Programm verwirkliche. Aber der Friede ist nichts anderes als "Ruhe in der Ordnung". Es ist unmöglich zu behaupten, dass Ordnung in unserem Wirtschaftsleben herrscht, solange die Arbeiterklasse nicht den Platz einnimmt der ihr gebührt und solange man sich nicht dazu entschliesst, der Arbeiterschaft volle Entwicklungsfreiheit für ihre geistigen und moralischen Eigenschaften zu geben und ihr den wirtschaftlichen, politischen und sozialen Einfluss einzuräumen, der ihr gebührt.

In diesem Geiste kämpfen die Syndikate um eine wirtschaftliche Ordnung zu verwirklichen, die zum wirtschaftlichen Frieden führen muss.

Wir sind überzeugt, das die I. R. I. im gleichen Geiste arbeitet.

ZUSAMMENFASSENDE SCHLUSSREDE VON MARY VAN KLEECK, VIZEPRÄSIDENTIN DER I. R. I., DIREKTORIN DER ABTEILUNG FÜR INDUSTRIELLE STUDIEN AN DER RUSSELL SAGE FOUNDATION, NEW YORK.

In der göttlichen Unzufriedenheit der Arbeiterschaft liegt eine Macht, die das zukünftige Menschheitsproblem lösen kann, es besteht nur die Gefahr, dass dies die einzige Macht sein könnte. Diese Worte wurden auf unserer Konferenz von einem deutschen Arbeitgeber ausgesprochen.
Wir suchen einen Weg für das Zusammengehen von Arbeitgebern und Arbeitnehmern durch Förderung arbeitswissenschaftlicher Methoden und die Verbesserung der Arbeitsbedingungen zu finden. Dieser Ausspruch wurde auf unserer Konferenz von einem französischen Arbeiter getan, dem Vorstandsmitglied eines Verbandes von Gewerkschaftsvereinen.
Er fuhr fort und sagte, dass wir diesen gemeinsamen Weg auf der Suche nach den ewigen Gesetzen finden würden, durch die wir zu erkennen trachten, was Vollendung ist, die Vollendung, die in der Harmonie liegt, in der Harmonie der Musik, in der Harmonie der Naturgesetze, die im Blühen der Blume oder im Gesetz der Schwerkraft zum Ausdruck kommt. Durch das Suchen dieser ewigen Gesetze kann der Weg gefunden werden, um die schöpferischen Kräfte im Menschen zu lösen. "Der Einklang vervielfachter menschlicher Anstrengung kann und wird die Macht des Genies ersetzen." *
Von einer anderen, nicht anwesenden Persönlichkeit, Mrs. Taylor, der Witwe Frederick Taylor's (dessen Grundsätze über wissenschaftliche Betriebsführung als Zusammenfassendes Ergebnis seiner Arbeit in Amerika während dieser Zusammenkunft oft zitiert worden sind), wurden uns durch Vorstandsmitglieder, die Mrs. Taylor in Paris getroffen hatten, folgende Worte übermittelt: "Mr. Taylor hat immer betont, dass das Interesse an rationeller Betriebsführung auch eine neue Wirtschaftsgesinnung bedinge. Taylor's Bemühen war darauf gerichtet, grössere Glückmöglichkeiten für die Arbeiter zu schaffen."

Diese Aeusserungen von drei Persönlichkeiten, von denen jede in einem anderen Verhältnis zum Wirtschaftsleben steht - Aussprüche, die gleichsam aus drei verschiedenen Erfahrungskreisen in drei verschiedenen Ländern stammen - möchte ich als die Quintessenz dieser Konferenz bezeichnen.
Wir haben viel über die funktionelle Organisation der Industrie gehört,, und da es meine Funktion zu sein scheint, den Inhalt der Verhandlungen zusammenzufassen, so will ich mich dieser Aufgabe nicht entziehen. Ich sehe sie als einen Versuch an, die Gedanken,, die uns gemeinsam zu Bewusstsein gekommen sind, in Worte zu fassen. In dem Bemühen, diesen Ideen Ausdruck zu geben, greife ich zurück auf die Ausführungen von Fräulein Fleddérus über Gruppenbeziehungen in der Industrie am zweiten Tage unserer Verhandlungen. Sie sagte, dass diese Gruppenbeziehungen charakteristisch für die Gegenwart seien und wegweisend für die zukünftige Entwicklung in der Richtung eines gesteigerten Massenlebens. Sie zitierte eine Aeusserung aus den Verhandlungen von Cambridge: "Die mannigfaltige Verflochtenheit und Wechselwirkung im Gesamtgefüge der Industrie bereitet den Boden für ein hoch entwickeltes soziales Verhalten."

* Jaurès.

ZUSAMMENFASSENDE SCHLUSSREDE

Was ist ein hoch entwickeltes soziales Verhalten? Diese Frage haben wir zu beantworten versucht, und es wurden verschiedene Kennworte der neuen Einstellung genannt. Ich möchte jene Worte zum Mittelpunkt meiner Zusammenfassung machen und zwar so, dass ich sie etwas anders anordne, indem ich die Begriffe zusammennehme, die gewisse Wirtschaftsbedingungen oder -stufen charakterisieren, wie z.B. die Massenproduktion; ferner diejenigen, die Vollzugsformen und -methoden bezeichnen, wie Normierung, Rationalisierung, Mechanisierung, Kombination; ferner diejenigen Begriffe, die eine innere Haltung und die Formen, in denen eine solche Haltung zum Ausdruck kommt, andeuten, wie Kooperation, Führerschaft, Standards, und schliesslich die Begriffe, die eine Aktivität bezeichnen: Funktionelle Arbeit, Konstruktive Arbeit, Dynamik.

Menschliche Beziehungen in der Industrie bilden sich im Rahmen wirtschaftlicher Tätigkeit, und es wäre fruchtlos, menschliche Beziehungen zu untersuchen, ohne die Struktur der Wirtschaft begriffen zu haben. Die Welt wird heute mit Nahrung, Kleidung und Wohnung versorgt, und die Bedürfnisse der Allgemeinheit werden befriedigt durch eine Kette ganz bestimmter greifbarer Wirtschaftsvorgänge, die sich auf Materialbearbeitung, Maschinen, Werkzeug und ein Netz von Verkehrseinrichtungen stützen und alle technischer Natur sind. Wir können die Beziehungen in der Industrie nur besser gestalten, wenn wir sie im Zusammenhang des gesamten Wirtschaftsprozesses erfassen.
Die Auffassung ist nicht richtig, dass sich unsere ethischen Anschauungen in primitiveren Zeiten der Weltgeschichte gebildet, aber keine Prägung durch die Gegenwart empfangen hätten, - obwohl sie die Formel der Ethik von morgen im Keime in sich bergen sollten, - wir sollten wenigstens über die Ethik von morgen nachdenken. Dies aber setzt voraus, dass wir eine Vorstellung der Wirtschaft von morgen haben und darum wählten wir für unser Thema nicht ein nebelhaftes, konstruiertes Idealbild ethischen Verhaltens eines Geistes, wie er in der menschlichen Gesellschaft vorwalten sollte, sondern positive Möglichkeiten zur Schaffung befriedigender menschlicher Beziehungen in einer rationell organisierten Industrie. Wir wollen versuchen, die Tendenzen und die Richtung der neueren Bestrebungen zu erkennen, die darauf hinausgehen, die Produktion zu erhöhen, die Qualität und die Produktivität zu steigern und Material- und Kraftvergeudung möglichst auszuschalten.

Wir müssen einmal feststellen, in welchen Formen die Bewegung zur wissenschaftlichen Betriebsführung in der Industrie in Erscheinung tritt. Ich will nicht auf die verschiedenen Definitionen für "Rationalization" und "Scientific Management" eingehen, sondern nur versuchen, die Bestrebungen zu charakterisieren, die mit diesen Worten bezeichnet werden. Der Begriff "Scientific Management" (wissenschaftliche Betriebsführung; Bestgestaltung der Arbeit auf betriebswissenschaftlicher Grundlage) ist leichter zu umschreiben als jene unbestimmten Komplexe von Massnahmen, die wir mit "Rationalization" (Rationalisierung) zu bezeichnen pflegen. Denn "Scientific Management" hat sich auf Grund jahrelanger beharrlicher Untersuchungen entwickelt die die Exaktheit der Methoden und Grundsätze verbürgten . Der Schauplatz ihrer Entwicklung war ein Betrieb der Vereinigten Staaten.

ZUSAMMENFASSENDE SCHLUSSREDE

Ich weiss nicht, ob sich jeder, der etwas über das Taylorsystem hört, darüber klar ist, dass Taylor ein Vierteljahrhundert auf Untersuchungen über die Methoden des Metallschneidens verwandt hat. Aber dies ist bezeichnend für seine Geistesrichtung. Die Prinzipien der wissenschaftlichen Betriebsführung wurden im langsamen Verfahren sorgfältiger Forschungsarbeit entwickelt. Aus diesen Untersuchungen und Erfahrungen, die die Ergebnisse von Laboratoriumsexperimenten über die Anwendung neuer wissenschaftlicher Verfahren für die Lösung von Betriebsproblemen darstellen, entstanden gewisse Grundsätze, die für diese Konferenz von einem unserer Mitglieder, dem Geschäftsführenden Direktor der Taylor Society in den Vereinigten Staaten, zusammengestellt worden sind. Diese Taylor Society hat einem Stamm von Persönlichkeiten, die noch unmittelbar mit Taylor zusammengearbeitet haben.
Die grundlegenden Prinzipien der wissenschaftlichen Betriebsführung, die hier aufgestellt wurden, sind vierfacher Art:

Untersuchungen der Betriebsleitung über alle Probleme und Verfahren der gesamten Betriebsverwaltung, einschliesslich der Qualität der Materialien, Qualität und Typen der verwandten Werkzeuge und Maschinen und der Verfahren und Formen der Betriebsleitung.

Zweck der Untersuchung ist die Planung und die Aufstellung von Arbeitsnormen, die ihre Geltung behalten, bis andere und bessere Normen aufgestellt werden können. Sie beruhen auf der Verwertung der besten im Augenblick verfügbaren Erfahrungen und Sachkenntnisse. Sie werden von objektiven Tatsachen bestimmt unter Ausschaltung aller willkürlichen und oft irrigen persönlichen Urteile derjenigen Leute, die speziell mit diesen Arbeiten befasst werden.

Kontrolle, und zwar nicht Kontrolle durch die Autorität, sondern Kontrolle durch Sachkenntnis, die durch die Verwendung der auf Grund der Betriebsforschung gewonnenen Normen und Erfahrungen überhaupt erst ermöglicht wird.

Und schliesslich das Zusammenwirken, die "Kooperation" aller im Betrieb beschäftigten Personen vermöge einer Arbeitsorganisation, die jedem Arbeiter oder Angestellten die denkbar beste Erfüllung seiner besonderen Aufgabe ermöglicht.

Das sind die grundlegenden Prinzipien der wissenschaftlichen Betriebsführung. Sie sind weit entfernt von jenen Pseudoformen wissenschaftlicher Betriebsführung, die nur auf eine möglichst rasche Erhöhung der Produktion hinausgehen, ohne das solide Fundament der Betriebsorganisation. Die wahre wissenschaftliche Betriebsführung sieht dieses Fundament als die einzig sichere Basis für jeden Wandel in Arbeitsmethoden oder in den Ertragsziffern an.

Die wissenschaftliche Betriebsführung gründet sich also auf Erfahrungen. Der Begriff "Rationalization" hat - das ist uns während der Verhandlungen der letzten Tage klar geworden - eine theoretische, idealistische Seite: Das Bestreben nach Anwendung rationeller Verfahren im Wirtschaftsleben - und er umschliesst gleichzeitig einen Komplex von Erfahrungstatsachen, deren Charakteristikum der durch wirtschaftliche

ZUSAMMENFASSENDE SCHLUSSREDE

Schwierigkeiten bewirkte Zusammenschluss von Betrieben und Industriezweigen ist.*

Wenn ich einmal von den Ausführungen über ungünstige Ergebnisse eines solchen Rationalisierungsprozesses, die in unserer Aussprache vorgetragen wurden, absehen darf, so möchte ich die Definition anfügen, die uns der Direktor des Internationalen Rationalisierungs-Institutes in Genf übermittelte: "Eine rationell organisierte Industrie ist eine Gruppe von Betrieben, die der Deckung ähnlicher oder verwandter Bedürfnisse der Allgemeinheit dienen - mit einer Mindestvergeudung von Kraft oder Material. Mit dem Worte "Kraft" sind alle menschlichen Belange erfasst, die uns hier interessieren. (A scientifically organized industry is a group of enterprises supplying similar or allied requirements to society with a minimum of waste of effort or material, comprising in the word "effort" all the human considerations which are of interest to us.)

Weiter möchte ich dieser Zusammenstellung von Definitionen eine Aeusserung anfügen, die in dem Bericht der I. R. I. für den Internationalen Rationalisierungskongress in Paris, der vor 14 Tagen stattfand, enthalten ist. Wir haben den Bericht auf früheren Verhandlungen von Tagungen der I. R. I. aufgebaut und betont, dass wissenschaftliche Betriebsführung oft in einem viel zu engen Sinn, d.h. lediglich in Bezug auf Werkzeuge und Maschinen angewandt wird. Der nächste Schritt in der Entwicklung der Bestgestaltung der Arbeit muss die Ausweitung der in ihr schlummernden Möglichkeiten sein, die Erweiterung ihrer Wirkungssphäre durch die Weckung eines vertieften Verständnissen für die Bedeutung der menschlichen Beziehungen bei allen in der Industrie beteiligten Gruppen. Hierauf ist der Nachdruck zu legen, und zwar nicht nur der Menschen wegen oder so, als ob diese isoliert von der Wirtschaft zu betrachten wären, sondern weil es wesentlich ist für die Schaffung einer rationellen Organisation der Industrie, die nur durch das rechte Zusammenwirken aller Faktoren im Wirtschaftsprozess - in technischer oder psychologischer, sozialer oder wirtschaftlicher Arbeit - herbeigeführt werden kann. Dieser allumfassende Begriff des Zusammenwirkens ist der einzige zuverlässige Führer bei der Organisation der Industrie, denn die Wirkungskraft einer Organisation beruht ebenso wie die Wirkungskraft eines Organismus auf der Grundbedingung sinnvoller Zusammenarbeit. Wenn ein Organismus oder eine Organisation schlecht funktioniert, so liegt es an einem Fehler im Zusammenspiel der Elemente. Die befriedigenden menschlichen Beziehungen sind nach Auffassung der I. R. I. nur dann wirklich befriedigend, wenn sie harmonisch sind. Sie dürfen von Theorie und Praxis der wissenschaftlichen Betriebsführung nicht negiert werden. Denn trotz der scheinbar überragenden Bedeutung von Material, Werkzeug und Maschinen wird die wissenschaftliche Betriebsführung schliesslich doch von menschlichen Wesen durchgeführt. Die "Bestgestaltung der Industrie", dieser Begriff, der in der deutschen Fassung des Namens der I. R. I. enthalten ist, verdeutlicht ein solches Zusammenwirken, das den bestmöglichen Vollzug wirtschaftlicher Arbeiten zum Zweck der gesellschaftlichen Bedürfnisbefriedigung zum Ziele hat.

* Der amerikanischen Begriff "Rationalization" wird viel häufiger als im deutschen in diesem erweiterten Sinne gebraucht.

Warum denkt man in allen Ländern heute so intensiv über die Frage einer besseren Gestaltung der Arbeit nach - über rationelle und wissenschaftliche Betriebsführung? Zweifellos weil unser Wirtschaftsleben durch den Krieg furchtbare Zerstörungen erlitten hat. Ausserdem kam der Krieg, ehe wir imstande waren, die Weltwirtschaft zu organisieren, denn wenn wir das schon vor dem Kriege fertig gebracht hätten, wäre es wahrscheinlich gar nicht zu einem Kriege gekommen. Die Desorganisation - die Notwendigkeit vermehrter Produktion und grosszügigerer Verteilung der Produkte in der Industrie, die so dringend ist und in manchen Ländern so schwere Krisen hervorgerufen hat, ist ein Weltproblem.

Darf ich hier ein Wort sagen, das eigentlich nicht in den Bericht gehört: Es bezieht sich auf die Vereinigten Staaten, auf etwas, das auf dieser Konferenz noch nicht ausgesprochen worden ist. Ich habe hier und auch sonst schon in Europa das Gefühl gehabt, dass manche Europäer glauben, Amerika könne die Bürde, die Europa zu tragen hat, nicht richtig einschätzen, weil Amerika nicht so gelitten hat wie Europa. Dies stimmt natürlich bis zu einem gewissen Grade; aber Sie müssen sich auch klar machen, dass die Schatten des Krieges sich tief über manche Herzen jenseits des Ozeans gesenkt haben. In Cambridge wurde gesagt, dass Amerika nicht angesehen werden sollte als ein Land für sich, sondern als die Endetappe der europäischen Völkerbewegung zu einer neuen Wirtschaftsumwelt, in der sich die Vereinigten Staaten so entwickelt haben wie wir sie heute kennen. Die Trennung während des Krieges bedeutete für uns dasselbe wie das Fernsein naher Angehörigen bei einem schweren Familienunglück.

Noch eins: heute, wo die wirtschaftlichen Beziehungen so eng verflochten sind, gibt es für Amerika tatsächlich keine wirtschaftliche Sicherheit, so lange Europa wirtschaftlich leidet. Und alles ist auch nicht so erfreulich in Amerika, wie es nach den Berichten von Reisenden erscheint, die für kurze Zeit herüberkommen, nur unsere östlichen Städte sehen und auch dort vielleicht nur das Leben in den Reichtum repräsentierenden Hotels kennen lernen. Ich denke an eine Versammlung von Kohlenarbeitern im Staate Illinois, der ich im vergangenen März beigewohnt habe. Die wirtschaftlichen Schwierigkeiten im Leben dieser Kohlenarbeiter und ihrer Familien zeigen nichts von dem behaupteten Reichtum amerikanischer Arbeiter. Sie waren alle aus Europa gekommen oder waren Kinder von Europäern. Die meisten der älteren Leute waren Engländer, Walliser, Iren oder Schotten; sie stammten aber zum Teil auch aus anderen Ländern. Vertreter aus Grossbritannien würden sich in dieser Versammlung sehr zu Hause gefühlt haben und Berichte über die Arbeitslosigkeit in britischen Kohlenbergwerken, die von einem amerikanischen Arbeiterführer erstattet wurden, der u.a. sagen konnte "Mein Bruder ist ein Kohlenarbeiter in England", zeigten die Gleichheit der Probleme auf beiden Seiten des Ozeans. Die Leute haben seit Jahren unter unregelmässiger Beschäftigung, Kurzarbeit, unzureichenden Löhnen zu leiden und unter einem Gemeinwesen, das weit von dem entfernt ist, was es sein sollte, - so sind die Zustände in einer der wichtigsten Industrien der Vereinigten Staaten.

Und dann denke ich an einen Streik, der kürzlich in einem Dorf in einem unserer südlichen Staaten - Tennessee - stattfand, einem Ort, der "das glückliche Tal" heisst, in das eine europäische Gesellschaft kam. Sie hatte gehört, dass die Arbeiterkräfte billig in den südlichen Staaten sind,

die Arbeiter, die sie beschäftigten, stammten von Engländern ab, die vor zwei Jahrhunderten eingewandert waren und in der Abgeschiedenheit ihres Lebens in den Bergen viele alte Gebräuche bewahrt hatten. Sie wurden aus dieser Heimat in den Bergen in das industrielle Leben hineingezerrt und traten mit einem Schritt von einem Jahrhundert in das andere. Es wurden sofort Versuche gemacht, die Produktion zu steigern und zu verbilligen. Ein Streik war das Resultat. Niemand weiss, was sich in den Spinnereien des Südens angesichts dieser Erscheinungen einer rapiden Industrialisierung demnächst ereignen wird. Im Norden wie im Süden leidet die Textil-Industrie sehr unter Depressionen, Arbeitslosigkeit, unregelmässiger Beschäftigung, niedrigen Löhnen - wie in allen anderen Staaten der Erde auch.

Unsicherheit des Lebens charakterisiert die Arbeit in grossen grundlegenden Industrien Amerikas. Sie erstreckt sich auch auf die jüngeren Industrien. Eine neue Untersuchung des Amts für Arbeiterstatistik in den Vereinigten Staaten (United States Bureau of Labor Statistics) zeigt, dass die Automobil-Industrie unter allen bisher erforschten Industrien die grössten Schwankungen der Beschäftigungsziffer aufweist. Die Vereinigten Staaten haben noch keine Sozialversicherung wie die europäischen Länder, abgesehen von der Arbeiterversorgung bei Unfällen. Bei Arbeitslosigkeit gibt es keinen gesetzlichen Schutz und nur wenige Firmen haben Fonds angesammelt für Zeiten unfreiwilliger Arbeitslosigkeit. Wir sind in mancher Beziehung eine bevorzugte Nation, aber wir bleiben doch nicht unberührt von den europäischen Problemen. Wir sind alle in die weltumspannenden wirtschaftlichen Probleme verstrickt, die mit der Erhöhung der Produktion und der Schaffung von Absatzgebieten zusammenhängt. Allerdings sind in Amerika Fortschritte gemacht worden in der Erkenntnis, dass höhere Löhne die Kaufkraft erhöhen und kürzere Arbeitsstunden die Lebenshaltung verbessern und dadurch wieder die Nachfrage nach Produkten steigern. Wir sind vielleicht zuerst auf diese Probleme gestossen. Wir dürfen dies Europa gegenüber vertrauensvoll sagen, in der Hoffnung, dass sich in der ganzen Welt die Lebenshaltung bessern wird, denn dies allein wäre die gesunde Basis für unsere Wirtschaft.

Soviel von Amerika. Es ist wichtig für uns, dass Europa über die amerikanischen Probleme nachdenkt. Wir müssen zusammen über die Weltwirtschaftsprobleme nachdenken und die Stellung, die Amerika zu ihnen einnimmt. In der I.R.I. können wir offen über diese internationalen Beziehungen diskutieren, weil wir uns der Gemeinsamkeit unseres industriellen und wirtschaftlichen Lebens bewusst sind.

Was ist in Europa und auch in der neuen Welt vor sich gegangen bei dieser Bewegung, die wir Rationalisierung nennen? Ich habe versucht darzulegen, dass sie in verschiedenartigen Formen in Erscheinung tritt, aber ihr Charakteristikum scheint mir der Zusammenschluss von Industrien unter einer einheitlichen Kontrolle zu sein. Es ist auf dieser Konferenz auch über die zunehmende Konzentration der Kreditkontrolle berichtet worden und über die Wandlungen, die sich in der Bildung und Bewegung des Kapitals in unserer Wirtschaftsorganisation zu vollziehen scheinen, mit der Wirkung, dass die Preisbildung nicht so schnell wie früher der Nachfrage folgt. Es ergeben sich die Möglichkeiten durch

Kartellbildung die Preise zu regulieren und unrentable Unternehmungen mit hohen Kosten und niedrigen Löhnen zu halten, ohne dass die Arbeiterschaft einen entsprechenden Einfluss auf die Arbeitsbedingungen oder der Verbraucher auf die Preise hat.

Und endlich haben die veränderten Bedingungen der Massenproduktion auch zu Veränderungen in dem alten Verhältnis zwischen Kapital, Preis, Lohn und Nachfrage geführt, Veränderungen, die wir vorläufig noch nicht genügend erforscht haben, um ein klares Bild über sie zu gewinnen. Diese neuen Bedingungen haben sich oft in Arbeitslosigkeit, Mechanisierung, erhöhtem Arbeitstempo ausgewirkt und ihnen gegenüber ist der Arbeiter sowohl als Individuum wie als Gewerkschaft machtlos und nicht mehr imstande, seine Stellung im Wirtschaftsleben zu behaupten.

Aber die Aussprache hier hat gezeigt, dass der Zusammenschluss der Industrien, die rationelle Organisation noch nicht bewirkt; oft ist ein solcher Zusammenschluss nur Machtbetätigung in einer neuen Form, ein Versuch, Herrschaft auf Grund von Autorität auszuüben. Das ist aber weder Bestgestaltung auf wirtschafts-wissenschaftlicher Grundlage, noch Rationalisierung im eigentlichen Sinne des Wortes. Gewalt ist immer etwas Törichtes, Gedankenloses, ein Ausgerichtetsein auf enge Ziele. Diese Ziele sind meist egoistisch; Zweck und Mittel verdienen weder sinnvoll noch rationell genannt zu werden. Das Streben der Nationen, sich mit Gewalt durchzusetzen, spiegelt sich in vielen Beziehungen des täglichen Lebens wieder, und es gibt heute Typen witrschaftlicher Zusammenschlüsse zum Zweck der Konzentrierung der Finanzkontrolle, die nichts anderes sind als Geltendmachung von Macht.

Ich möchte nicht den Eindruck erwecken, als nähme ich an, dass alle industriellen Zusammenschlüsse Manifestationen der Gewalt seien. Weit entfernt. Ich will nur sagen: wenn sie bezwecken, die Macht einer Gruppe über Produktionsmittel im eigenen Interesse ohne Rücksicht auf die Interessen der Arbeitnehmer und der Verbraucher zu steigern, dann ist dieser Zusammenschluss nur ein Instrument der Gewalt. Wenn ihr Zweck aber die Bessergestaltung der Produktion oder des Wirtschaftsdienstes ist, so kann das beste Mittel zur Erreichung dieser Ziele sehr wohl ein sorgfältig vorbereiteter Zusammenschluss der Industrien sein, der dann nicht Gewalt, sondern r a t i o n e l l e O r g a n i s a t i o n bedeuten würde.

Aber wie kann diese rationelle Organisation der Industrie erreicht werden? Gehen wir zum Einzelnen zurück, zur Arbeit in den Betrieben. Es wurde schon in Cambridge gesagt: Im Betriebe werden die menschlichen Beziehungen geformt und vom Betriebe als eine Einheit geht die Möglichkeit aus, die Industrie als Ganzes zu organisieren. Ich möchte Sie nur kurz an die Diskussion über "Arbeit und Arbeitsbedingungen" erinnern. Es wurde uns hier ein Beispiel für die sozialwissenschaftliche Behandlung eines spezifischen Arbeitsproblemes gegeben: nämlich Versuche zur Feststellung der optimalen Arbeitszeit. Von der Annahme ausgehend, dass Veränderungen im Produktionsertrag auch Veränderungen der Ermüdung des Arbeiters zur Folge haben, hat das "Industrial Fatigue Research Board of England" Versuche über tatsächliche Wirkung der Verkürzung der Arbeitszeit auf den Ertrag angestellt. Einige Resultate dieser Untersuchung unter besonderer Berücksichtigung der Fünf-Tage-Woche wurden uns hier vorgetragen. Im Laufe der Diskussion wurde klar, dass eine rein quantitive Bemessung der Wirkungen verkürzter Arbeitszeiten auf

den Ertrag keine erschöpfende Antwort auf die Frage nach der optimalen Arbeitsdauer gibt. Wenn der Ertrag bei verkürzter Arbeitszeit durch erhöhtes Arbeitstempo auf der gleichen Höhe gehalten wird, so taucht die Frage auf, welches ist die kulturell noch zulässige "Arbeitsintensität"? Müssen Arbeitsdauer und Arbeitstempo nicht so geregelt werden, dass im Laufe des 24 Stunden-Tages genügend Zeit zur Erholung von der Arbeitsermüdung bleibt, und zwar so, dass der Arbeiter noch genügend Spannkraft zur Ausnutzung seiner Freizeit behält?

Es wurde aufgezeigt, dass sich die Arbeitsverkürzung bei verschiedener Arbeit natürlich auch in differenzierter Weise auf den Produktionsertrag auswirkt. Wenn es sich vorwiegend um Handarbeit handelt, so kann der Arbeiter sein Arbeitstempo kontrollieren und seine Leistung wird durch zweckmässig verkürzte Arbeitszeit günstig beeinflusst. Wenn es sich aber um Maschinenarbeit handelt, dann sollte erhöhte Leistung hauptsächlich durch verbesserte technische Anlagen und Verwendung der besten Maschinen erreicht werden, damit in einer gegebenen Zeit ein gegebenes Quantum erreicht werden kann. Dieser Vorschlag kam von einem Arbeiter. Grössere Erträge konnten nicht dadurch erreicht werden, dass die Arbeiter zur erhöhten Anstrengung getrieben wurden, sondern nur durch Untersuchung der Möglichkeiten, durch die mit geringerem Kraftaufwand bessere Erträge zu erzielen wären. Kurz, die Mechanisierung hat die Industrie auf den Punkt gebracht, auf dem vermehrte Leistung von der technischen Ausgestaltung und den Methoden der Betriebsleitung abhängt. Es handelt sich also nicht darum, dass die Fähigkeit des Arbeiters zu erhöhter Arbeitsintensität durch die Ausschaltung überflüssiger Ermüdung gesteigert wird, sondern vor allem darum, dass durch maschinelle Verbesserungen die sozial wünschenswerte Verminderung der Arbeitsstunden ermöglicht wird.

Bei der Feststellung dessen, was sozial wünschenswert ist, muss das Bedürfnis des Arbeiters nach Freizeit in Betracht gezogen werden, und die Wirkung von langer Arbeitszeit auf das Familien- und das Gemeinschaftsleben. Es ist dies eine der Arbeitsbedingungen, deren Festsetzung nicht nur auf Grund sorgfältiger Berechnung (factual basis) erfolgen kann - so wertvoll diese auch sein mögen - sondern bei der auch die Erfahrungen des Arbeiters zu Rate gezogen werden müssen. Solche Erfahrungstatsachen können aber für den Betrieb nur dann voll ausgewertet werden, wenn die Arbeiter in irgend einer Form an der Festsetzung der Arbeitsbedingungen beteiligt werden.

Hiermit wandten wir uns der Frage der Heranziehung der Arbeiter zur Betriebsverwaltung zu. Wir sahen, dass in allen Ländern bereits verschiedene Organisationsformen der Arbeitervertretung im Betriebe bestehen, aber dass der Wille, sie wirksam werden zu lassen, nur schwach ist. In vielen Industrien haben wir uns noch nicht viel von jenen Zuständen entfernt, bei denen die Arbeiter "blind auf unhaltbare Zustände reagieren", wie ein Gewerkschaftsvertreter es hier ausdrückte. Wir sind noch weit von einer Konstellation entfernt, bei der den Organisationen der Arbeiterschaft eine funktionelle Rolle eingeräumt und es ihnen ermöglicht wird, die Wirtschaftspolitik des Werkes und ihre Durchführung mit zu bestimmen. Obwohl dies noch im allgemeinen so ist, haben wir doch auch Beispiele der Mitarbeit der Arbeiterschaft an verantwortlicher Stelle. Die Erfahrungen, die in solchen Werken gemacht sind, beweisen offensichtlich, dass kein wesentlicher Widerspruch zwischen betriebswis-

senschaftlicher Verwaltung und Selbstverwaltung in der Industrie besteht. Wie der Direktor des Internationalen Rationalisierungs-Instituts auf unserer Konferenz sagte, ist die Selbstverwaltung ein Mittel, um das Verständnis und die richtige Auffassung der Arbeiter für wirtschaftliche Fragen zu fördern. Sie ist aber auch ein Mittel, um dem Arbeiter Vertrauen in die Beschlüsse der Betriebsleitung einzuflössen, ein Vertrauen, ohne das ein Werk nicht befriedigend produzieren kann.

Von der Möglichkeit der Beteiligung der Arbeiterschaft an der Werksleitung wandten wir uns der Frage der Personalpolitik und -verwaltung in einem rationell organisierten Betriebe zu. An dieser Stelle kann nur noch einmal an den Grundgedanken erinnert werden, der bei den Verhandlungen über dieses Thema herausgearbeitet wurde, dass nämlich bei einer funktionellen Organisation der Industrie, die es möglich macht, Entscheidungen auf Tatsachen und nicht auf subjektive Ansichten oder Mutmassungen zu stützen, die Begriffe "Betriebsleitung" und "Kontrolle" einen neuen Sinn erhalten. Betriebsleitung (Management) wurde uns gesagt, bedeutet Planung und Vorausdenken. Haben wir nicht oft an Betriebsleitung im Sinn des Manipulierens und Kommandierens gedacht? In einem Betrieb, der seine Pläne und Organisationsmaximen in Uebereinstimmung mit den Prinzipien einer rationellen Betriebsführung entwickelt, gibt es - wie Taylor sagt - **nur einen Meister, und der heisst "Wissen"**. Wenn das Wissen Meister ist, so erhält das Wort "Kontrolle" einen ganz anderen Sinn. Es handelt sich dann nicht mehr um die Macht der Autorität, sondern um Führung durch überlegenes auf Forschung und Erfahrung gegründetes Wissen.

Wenn die Leitung einer Industrie auf Wissen gegründet ist, und dieses Wissen wiederum zum Führer für die tägliche Praxis wird, so muss sich auch die Haltung der Betriebsleitung ändern und menschliche Beziehungen können die Basis einer Arbeitsgemeinschaft bilden, statt dass sie im wesentlichen darin bestehen, dass die, die Autorität besitzen die Arbeit der ihnen unterstellten Personen kontrollieren. Diese neue Auffassung der Betriebsführung hat sich noch in keinem Industriezweig durchgesetzt. Sie ist in einzelnen Betrieben mit Erfolg angewandt worden, aber wir sind noch nicht dazu gelangt, die gesamte Kohlen- oder die gesamte Textilindustrie unter eine wirklich rationelle Organisation zu stellen.

Die gleichen Prinzipien, die wir in einem Einzelunternehmen anwenden lassen, müssten sich auch auf eine ganze Industrie übertragen lassen. Da es noch an praktischen Beispielen fehlt, können wir noch nicht aus Erfahrung über die Wirkung der rationellen Organisation in der Industrie sprechen. Wir können heute nur sagen, dass sich die Industrie auf dem Wege zur rationellen Organisation befindet. Wir können die Umrisse des Traumbildes erkennen, das der Direktor des Internationalen Rationalisierungs-Institutes am Schluss seines Vortrages entwarf. Wenn der Zweck des Zusammenschlusses in der Industrie gerichtet wäre auf die Steigerung der Produktivität, auf die Erzielung niedrigerer Preise für den Konsumenten, höhere Löhne für den Arbeiter und auf sicherere, und damit befriedigendere Anlagemöglichkeiten, dann würden sich die Finanzierungsmassnahmen in Bezug auf Betriebsleitung, Kontrolle und Verteilung der Produktion auf rationeller Basis vollziehen mit dem Ziel des Dienstes an der Allgemeinheit.

ZUSAMMENFASSENDE SCHLUSSREDE

Dies mag nur ein Traum sein, etwas noch im Unterbewusstsein Liegendes, aber wir haben in der Industrie bereits genügend Erfahrung gesammelt, um glauben zu dürfen, dass der Traum Entwicklungstendenzen spiegelt, deren wir uns mehr und mehr bewusst werden müssen. Wir können nicht weit in die Zukunft schauen, aber doch so weit, um uns klar zu werden, dass wir sofort in den Betrieben neue Methoden anwenden können, die auf einer andern Einstellung zur rationellen Organisation beruhen. Mit diesen neuen Methoden werden wir Erfahrungen für weiteren Ausbau sammeln können.

Wir haben als Ergebnis dieser Konferenz kein Programm aufgestellt. Unsere Aussprachen haben erweisen wollen, welche Bedeutung es hat, dass wir in unseren Betrieben und in unseren Industrien Formen und Verfahren der Betriebsführung entwickeln, die die schöpferischen Kräfte derer auslösen, die dort arbeiten, ganz gleich, welches ihre Tätigkeit sein möge. Wir müssen die Kräfte der in der Industrie tätigen Gruppen frei machen, nicht damit sie sich gegenseitig bekämpfen, sondern damit sie für ein gemeinsames Ziel arbeiten. Lassen Sie mich an die Worte des Berichtes über den Kongress in Cambridge erinnern, dass es der Zweck der Gruppenbildung ist, die Integrität des Individuums zu wahren. Sie verliert das Individuum nicht aus dem Auge, sie verleiht dem Individuum mehr Kraft, durch die gesteigerte Kraft seiner Gruppe zu gemeinsamer Arbeit nach gemeinsamem Ziel.

Auf Gewalt muss verzichtet werden, und auf überholte Anschauungen über unsere Wirtschaft, wenn wir eine befriedigende Wirtschaftsorganisation schaffen wollen, die den Bedürfnissen der Gegenwart gerecht wird. Die Welt braucht eine industrielle Organisation, die der Gesellschaft und allen ihren Gliedern in rationeller Weise dient und nur diese ist Wert, Lebensaufgabe von Männern und Frauen zu sein, die mit Hand und Kopf im Wirtschaftsleben arbeiten.

TRADUCTIONS

DES GROUPES COMME FACTEURS FONDAMENTAUX DES RELATIONS INDUSTRIELLES, PAR M. L. FLEDDÉRUS, VICE-PRÉSIDENTE DE L'I. R. I.

Notre programme indique que la question "Des groupes comme facteurs fondamentaux des relations industrielles" sera brièvement discutée en manière d'introduction à l'étude de notre sujet intitulé: "Qu'est-ce qu'une industrie rationnellement organisée?"

A mon avis, nous pourrions difficilement ouvrir notre discussion d'une autre manière. Si l'organisation scientifique du travail est l'une des moitiés du cercle par lequel on pourrait symboliser l'organisation rationnelle, les relations industrielles en constituent à coup sûr l'autre moitié.

Que ces relations industrielles soient des relations de groupes, plutôt que des relations individuelles, c'est à la fois une marque de l'époque où nous vivons et le signe précurseur d'un avenir de vie collective encore plus développée, vers lequel il semble que nous tendions.

A quel point cette existence en groupes est caractéristique de notre temps, comparée aux relations d'homme à homme de jadis et aux stades encore relativement récents de l'industrie, c'est ce dont nous trouvons l'expression dans les termes cruciaux de notre littérature industrielle actuelle. J'en ai noté quelques-uns au fur et à mesure de leur rencontre.* Ils nous sont à tous familiers; toutefois il pourrait être intéressant et fécond de les examiner et de les compléter au cours de nos discussions. Ces mots sont la marque de la vie que nous vivons, consciemment ou inconsciemment.

A Cambridge, le Dr. Delisle Burns a spécialement traité le sujet des groupes dans l'industrie; pourtant, si l'on parcourt le rapport du Congrès, il est intéressant de voir combien tous les orateurs se sont étendus sur le fait du groupement dans l'industrie. Certains, comme le Dr. Myers, le Dr. Miles, le Major Urwick, d'une façon très directe; dans d'autres exposés, nous retrouvons, immanente, cette idée de groupe.

Le but du Congrès de Cambridge fut, en réalité, de rechercher une plus claire conscience du monde industriel dans lequel nous vivons. Ce dont nous n'avons pas conscience ne nous touche pas. Par contre, dès que nous prenons pleinement conscience soit d'un fait soit d'un développement nous pouvons entreprendre de le compléter ou de le combattre, d'y remédier ou de l'adapter. Notre vrai malaise reside toujours dans la période de la semi-conscience.

Or actuellement, nous sommes - c'est mon impression - dans une telle période de semi-conscience industrielle. Le malaise de cette période doit sa gravité à la soudaine croissance de l'industrie, croissance complexe dont toute la signification ne pourra apparaitre qu'avec le temps. Mais, si nous le voulons, nous pouvons accomplir une oeuvre de pionniers en devançant celle du temps, amoindrir le malaise par l'étude impartiale de cette évolution et en nous faisant les avocats conscients des mesures propres à alléger la tension existante et à favoriser un meilleur état de choses.

* Termes cruciaux de l'industrie contemporaine: production en masse, rationalisation, standardisation, interdépendance, interaction, coopération, direction, travail par équipes, cartel, complexe, dynamique.

FORMATION DE GROUPES

C'est donc l'existence en groupes dans l'industrie sur laquelle nous voyons sans cesse revenir et insister le texte du Rapport de Cambridge. Cela posé, l'importance et l'urgence de la direction des groupes apparaissent tout de suite. Car si beaucoup constituent le groupe, un seul individu ou seulement quelques-uns assument de le conduire.

A Cambridge, M. le Major Urwick a dit: "Nous avons le devoir de soumettre à notre examen et de repenser d'un bout à l'autre cette question de la direction (des groupes). Ce devoir est urgent. Car tant que nous ne l'aurons pas accompli, nous ne pourrons compter sur le secours d'aucun changement dans l'organisation supérieure de l'industrie. Dans toute oeuvre de longue haleine, ce sont les détails de chaque jour qui comptent. Les relations industrielles naissent dans la fabrique."

C'est parce que, tous, nous sentons qu'une force, une puissance est engendrée à l'usine - non pas seulement le pouvoir de faire des marchandises, mais, en même temps, celui de créer des relations humaines - que nous nous sommes réunis pour discuter. C'est la première fois, depuis la constitution, à Flessingue, de notre Association, que nous pouvons avoir le sentiment de nous assembler pour une discussion féconde. Nous avions besoin, d'abord, de grandir ensemble et de trouver une base commune. C'est ce que nous avons fait avant Cambridge et au Congrès. Nous avions également besoin de voir et de déterminer à distance, comme au télescope, le monde économique et social qui nous entoure, dans lequel nos fabriques ne sont que des unités et où elles jouent le rôle de simples organes à l'intérieur d'un plus grand organisme. Sans la vision plus large de cet horizon, nous ne saurions distinguer vers quelles régions pourrait nous conduire n'importe laquelle des méthodes que nous serions amenés à concevoir.

Je pense que je n'ai pas besoin de m'étendre sur les diverses allusions faites à la question des groupes tout au long du Rapport sur le Congrès de Cambridge. Dans le programme imprimé, nous n'avons donné que quelques très rares citations et mentionné seulement un petit nombre de contributions. Mais ceux d'entre vous qui étaient présents à Cambridge, comme ceux également qui ont lu le Rapport, se rappelleront certainement les nombreuses mentions faites des "groupes", indépendamment de l'exposé spécial donné sur ce sujet par le Dr. Delisle Burns. Il y a les groupes essentiels (tels que les travailleurs, les organisateurs, les possesseurs), et il y a les groupes infiniment plus nombreux formés - comme l'a formulé le Dr. Delisle Burns - "par la pression des mêmes circonstances sur l'esprit des individus." Nous retrouvons la même ligne de pensée chez le Dr. Miles, quand il dit: "Dans l'industrie il y a toujours tendance à la croissance des groupes. A l'usine, un certain nombre d'hommes et de femmes occupés à un travail semblable ont en commun les mêmes expériences. Ils ont des difficultés semblables dans leur travail, ils ont avec la direction de l'entreprise les mêmes contacts, et avec le temps, on voit se développer un mode de réaction convenu." Le Dr. Miles continue en ces termes: "Il n'y a rien d'étonnant, vu les conditions de l'industrie moderne et le haut degré de spécialisation qu'elles requièrent, à ce que des groupes se développent en grand nombre à l'intérieur de l'organisation."

Le Dr. Myers arrive au groupe par l'étude de l'individu. "Dans l'entourage de l'individu se trouvent impliqués d'autres individus. Il est donc

nécessaire, pour étudier l'individu, d'étudier l'influence exercée sur lui par le "groupe".

Ces quelques citations fournissent déjà une matière suffisante à notre réflexion. Si, d'une part, la pression des circonstances crée, dans l'industrie, des groupes, elle crée aussi, d'autre part, ce que le Dr. Delisle Burns appelle "l'occasions d'une attitude sociale hautement développée, occasion dont on n'a point, jusqu'ici, fait usage." Que signifient ces termes d'une attitude sociale hautement développée dans l'industrie? Le Dr. Burns ne l'a pas explicité dans son exposé et je serais curieuse de voir si nous serons parvenus, à la fin de notre semaine de discussion, à nous en faire ensemble une conception claire et pratique. L'importance et la nécessité de la direction, dans les groupes, seront j'en, suis certaine, nettement indiquées dans cette conception.

L'un des mots les plus récents, dans l'industrie, est celui de "standardisation." Or c'est un mot de "groupe". On l'emploie toujours pour parler de matériaux ou de procédés. Je propose qu'un autre mot l'accompagne en importance, à savoir le mot de "standard". L'industrie se préoccupe de,la standardisation des machines, des outils et des produits; mais ne devrait-elle pas également se préoccuper du "standard" relatif aux techniques humainement souhaitables, aux récompenses culturelles, à la discipline éducative et à la morale supérieure du travail? Etant donné que nous avons cessé de trouver, dans notre industrie, des relations d'homme à homme, presque partout remplacées aujourd'hui par des relations de groupe à groupe, un "standard" progressif, proposé et compris par ceux qui ont eu eux-mêmes cette étincelle qui fait que l'on dirige, ne jouerait-il pas le rôle d'une accumulation de force? Je crois que c'est à cette idée que M. le Major Urwick a fait allusion à Cambridge lorsqu'il a mentionné qu'en Grande Bretagne il y a des exemples où le groupe des directeurs et employeurs a suscité ce qu'il appelle "un degré surprenant d'effort coopératif et de sentiments envers l'entreprise collective en tant que telle, depuis les degrés le plus modestes du personnel". M. le Major Urwick ajoute qu'ils n'ont pas à s'en faire gloire. C'est simplement une démonstration de l'étonnante aptitude de l'esprit humain à concevoir les engagements et les idéals collectifs - champ à peu près encore en friche de la psychologie. Je vous soumets à tous, poursuivit M. le Major Urwick, l'idée que ce seul fait contient le germe d'un espoir en ce qui concerne le progrès social à venir de l'humanité. Nous avons là, à notre portée, une puissance dynamique d'amélioration."

A mon sens, ce pouvoir est d'autant plus grand que l'industrie se trouve de plus en plus être constituée par des groupes. Car le développement de cette puissance dynamique ne repose pas seulement sur les employeurs et sur les organisateurs du travail. Il repose aussi bien sur le grand nombre des groupes accidentels que sur les groupes essentiels eux-mêmes. Sa manifestation, sa force, dépendent à leur tour de ceux qui comprennent les "standards" et les techniques adoptées par l'organisation du travail en collaboration avec les ouvriers, et qui peuvent susciter, dans leurs groupes respectifs, une réponse à la question de savoir quels doivent être leurs engagements et leur idéal.

Nous avons une semaine devant nous pour essayer de concevoir ce que

devraient être les "standards" et les techniques susceptibles de favoriser des relations humaines satisfaisantes dans une industrie rationnellement organisée. La tâche que nous nous sommes proposée n'est pas facile. Il n'existe pas d'expérience d'une organisation complètement scientifique, - disons plutôt "rationnelle". Nous ne pouvons pas nous fonder sur le passé, et nous ne le pouvons que partiellement sur le présent. Nous avons à faire entrer l'avenir dans ce présent.
Telle est, en réalité, la tâche que nous nous sommes assignée. C'est à chacun de nous d'y concourir. Il y a un pouvoir créateur dans la pensée en commun. Nous avons quelquefois besoin d'un sommet de montagne pour embrasser d'un coup d'oeil d'ensemble le pays qui est devant nous: après quoi, nous pouvons redescendre chacun dans notre vallée, où nous travaillerons alors avec la conscience du but à atteindre, avec discrimination et en connaissance de cause.

ORGANISATION RATIONELLE

PAR L. URWICK, O.B.E., M.C., M.A., DIRECTEUR DE L'INSTITUT INTERNATIONAL DE L'ORGANISATION SCIENTIFIQUE DU TRAVAIL, GENÈVE.

Le mot de "rationalisation" n'a pas été défini par une moindre autorité que la Conférence économique internationale de 1927. Cette conférence était composée des représentants des employeurs, des travailleurs et des économistes de presque toutes les nations. Sa sous-commission de l'Industrie consacra une part considérable du temps dont elle disposait à cette question précise et put s'appuyer, à cet effet, sur une masse de travaux préparatoires. A l'issue de ses travaux, la sous-commission avait abouti à des conclusions parfaitement définies rédigées sous forme de résolutions commençant en ces termes: "La rationalisation, mot par lequel nous entendons les méthodes de technique et d'organisation ayant pour but d'assurer la perte minima d'effort et de matériel....comprend l'organisation scientifique du travail, la standardisation tant des matériaux que des produits, la simplification des procédés et l'amélioration du système de transport et de mise en circulation sur le marché."

Le "Reichskuratorium für Wirtschaftlichkeit", office central chargé d'étudier les méthodes de rationalisation en Allemagne, avait déjà publié une définition ainsi conçue: "La rationalisation consiste dans la conception et dans l'application de tous les moyens propres à améliorer la situation économique générale par une organisation technique et systématique. Elle a pour objet d'élèver le niveau de la vie en permettant la fabrication de marchandises meilleures et à meilleur marché, en quantités plus considérables. Ce but réclame un commun effort de la part de toutes les classes de la communauté." On remarquera à quel point cette dernière définition correspond à celle de la Conférence économique internationale.

L'un et l'autre, le "Reichkuratorium" et la Conférence économique internationale, indiquent en quoi consiste la fin à laquelle répond la rationalisation: d'une part, assurer "la perte minima d'effort et de matériel", d'autre part "relever le niveau de la vie en permettent la fabrication de marchandises meilleures et à meilleur marché, en quantités plus considérables."

Il me semble que beaucoup de critiques méconnaissent la signification de la rationalisation pour avoir, à force d'en envisager les méthodes, perdu de vue le but parfaitement défini sans lequel ces méthodes elles-mêmes n'auraient aucun sens. L'acceptation de ces fins précises par une Conférence économique internationale marque un véritable commencement absolu dans notre pensée d'ordre économique. Dans une résolution ultérieure, la Conférence déclara que "la rationalisation est destinée à assurer à la communauté une plus grande stabilité et un niveau de vie supérieur." Cet énoncé admet clairement que, quelle que soit la forme d'organisation que nous devions accepter comme étant la plus pratique pour le moment présent, l'industrie et le commerce impliquent l'existence d'un but situé au-dessus et au-delà du profit des entreprises particulières. Notre mécanisme économique n'existe pas pour l'enrichissement des individus, - cet enrichissement n'est qu'une incidence, - mais pour le service de la communauté. C'est pourquoi je vous proposerais de reconnaître que le premier élément à faire entrer dans une définition de ce qui constitue une industrie scientifiquement organisée soit l'énoncé exprès de ce but ou de cette fin, qu'il conviendrait de formuler à peu près en ces termes:

une industrie scientifiquement organisée consiste en un groupe d'entreprises ayant pour tâche de subvenir à des besoins analoques ou complémentaires de la communauté, selon des méthodes impliquant une perte minima d'effort et de matériel.

Je n'aurai guère besoin de souligner quelle révolution mentale, - pour reprendre l'une des formules favorites de Taylor sur l'organisation scientifique du travail, - se trouve impliquée par cette franche admission d'un but d'ordre social sous-jacent à notre structure économique. Jusqu'alors, le monde économique avait été dominé par des conceptions héritées d'une période d'artisanat et ne correspondant absolument plus aux nouvelles conditions techniques résultant de l'application aux machines d'une force quelconque, telle que la vapeur, etc. On constate toujours quelque chose de ce retard entre les techniques développées par la société et la mise au point des idées sociales à l'égard des conditions nouvelles.

La production mécanique, dominée par le concept de la division du travail, exige, pour sa réalisation effective, une délicatesse de coopération tout à fait superflue dans une industrie manuelle et localisée. L'impérieuse nécessité de cette coopération ne s'étend pas seulement de la simple fabrique particulière à l'ensemble des marchés ou d'un pays, mais elle s'impose à toute la superficie du globe civilisé. Il est inutile d'insister, devant cet auditoire, sur le délicat enchevêtrement d'efforts complémentaires impliqué, par exemple, dans la vente d'une livre de thé dans un magasin de New-York ou dans celle d'un vêtement d'indienne à Calcutta. Il est stupéfiant que nous ayons si longtemps continué à croire que ce réseau complexe d'aide et de collaboration mutuelles pût être uniquement réglé en fonction d'une théorie qui, exprimée dans sa forme la plus crue, se réduit à dire: "Chacun pour soi et que le diable se charge du reste".

Je suppose que les générations à venir, lorsqu'elles tourneront les yeux vers notre époque, considèreront comme l'un des incidents les plus remarquables de l'histoire de l'esprit humain le fait que la civilisation industrialisée de l'Occident ait, au cours du 19me siècle, expressément exclu de ses préoccupations le moindre souci de responsabilité à l'égard de toute la délicate structure de sa vie économique. De même que nos premiers ancêtres attribuaient l'action des forces qu'ils ne pouvaient expliquer à l'intervention de "quelque Dieu", de même, dans une large mesure, le monde des affaires a, jusqu'à nos jours, attribué toute la régulation de la vie économique à la providence supposée bienveillante de "quelque Dieu", appelé Concurrence. Je crois également que le même étudiant de l'avenir, qui considèrera avec stupeur notre interprétation animiste des faits économiques, verra dans la Conférence économique internationale de 1927 l'aube d'un âge nouveau. Il notera que, pour la première fois, quelque obscurément et quelque insuffisamment encore qu'ils y aient procédé, les pionniers, en ces matières, de la pensée humaine ont envisagé la possibilité, pour l'homme, d'assumer le contrôle conscient de son activité économique et de la diriger délibérément et définitivement au profit du bien commun.

Je crois de même que cet observateur de l'avenir, en suivant l'évolution de notre pensée, sera particulièrement frappé par un certain aspect de la question. Il remarquera que la solution des difficultés et des complications de la vie économique dont l'existence avait poussé la pusillanimité du 19ème siècle à refuser toute responsibilité de contrôle, a été fournie par cette même technique intellectuelle qui avait rendu possibles les pro-

grès matériels constituant l'origine de ces complications. Je veux, naturellement, parler de la technique intellectuelle élaborée par les praticieus des sciences exactes, - technique qui a rendu possible l'ère des machines.

Si nous abordons la méthode, nous remarquerons que le "Reichskuratorium" parle d'organisation technique et systématique. La Conférence économique internationale a dressé une liste de mouvements dépendant, chacun pris à part et tous en général, non seulement des découvertes réalisées par les sciences matérielles elles-mêmes, mais encore de l'emploi, en vue de leur application à la vie pratique, des méthodes intellectuelles élaborées par les travailleurs pratiquant ces sciences.

Si nous nous plaçons à ce point de vue, la relation entre la rationalisation et l'organisation scientifique du travail devient parfaitement claire. Dans le domaine de l'organisation des entreprises industrielles particulières, F. W. Taylor a inauguré l'application de la méthode scientifique intellectuelle. La rationalisation applique à son tour cette méthode, toutefois non seulement aux problèmes de l'organisation industrielle et dans les seuls cadres de l'ordre économique existant, mais à la coordination de toute l'activité économique mondiale sur une échelle à la fois nationale et internationale, autrement dit, à la solution de t o u s les problèmes de la production, de la consommation et de la distribution. En un mot, elle aplpique cette méthode à la réédification de la vie économique dans son ensemble.

Tout théoricien sincère de la rationalisation admettra avoir contracté une dette immense envers le mouvement de l'organisation scientifique du travail. Il ne fait rien d'autre que d'appliquer sur une plus grande échelle cette "révolution mentale" dont parlait F. W. Taylor. Il semble donc bien qu'il n'y aurait qu'un fort minime intérêt pratique à s'étendre sur la détermination des limites précises de l'organisation scientifique du travail. Cette dernière a précédé ce mouvement d'idées plus vaste et plus général que l'on appelle "rationalisation". Elle lui a apporté une contribution essentielle. Pour autant que cette contribution n'est pas mise en doute, il ne conviendra guère à ceux dont la philosophie porte l'un ou l'autre de ces deux noms, de perdre leur temps à en discuter les bornes exactes.

Si l'on accepte cette analyse de ce qu'impliquait les résolutions de la Conférence économique internationale, il s'ensuit immédiatement que la rationalisation est à la fois une attitude et un procédé. En tant qu'attitude, elle affirme l a c r o y a n c e q u'un c o n t r ô l e p l u s r a t i o n n e l d e l a v i e é c o n o m i q u e m o n d i a l e, p a r l'a p p l i c a t i o n d e l a m é t h o d e s c i e n t i f i q u e, e s t p o s s i b l e e t d é s i r a b l e. En tant que procédé, elle implique l'a p p l i c a t i o n d e l a t e c h n i q u e i n t e l l e c t u e l l e s c i e n t i f i q u e à t o u s l e s p r o b l è m e s s o u l e v é s p a r l'o r g a n i s a t i o n e t l a c o n d u i t e d e l a p r o d u c t i o n, d e l a d i s t r i b u t i o n e t d e l a c o n s o m m a t i o n.

Etant donné, d'ailleurs, que cette vaste conception que nous appelons rationalisation remonte uniquement, en Europe, à quelques années et que, même aux Etats-Unis, elle date seulement de 1921, nous ne pouvons guère nous attendre à être à même d'invoquer des exemples pratiques et complets d'industries rationalisées ou organisées scientifiquement. Ce n'en est pas encore l'heure.

Encore de nos jours, il n'est pas une seule usine au monde dont on

puisse dire qu'elle est scientifiquement organisée dans la totalité de ses opérations. Mais si l'on considère, par contre, des industries entières, on trouve un champ beaucoup plus étendu et, par conséquent encore beaucoup plus lent à réagir à tous les efforts, sans compter que, dans la plupart des cas, la phase d'éducation nécessaire demande la collaboration, non point d'employés salariés, mais d'employeurs indépendants.

En conséquence, toute tentative de définir ou de décrire une indusrie scientifiquement organisée ou, s'il m'est permis de prendre l'un et l'autre terme comme syonymes, une industrie rationalisée, devra nécessairement, dans la phase actuelle, aboutir à une juxtaposition fragmentaire d'expériences partielles et d'effort encore non-concluants ou insuffisamment chaleureux.

Ces efforts sont en voie de réalisation sur toute la surface du globe. Avant la période des dix dernières années, sans doute ne s'était-il jamais produit, à ancune époque, d'aussi brusque révolution dans la pensée humaine à l'égard des affaires économiques et de leurs répercussions sur la vie sociale. Mais il nous a fallu un bon siècle pour nous adapter effectivement aux problèmes techniques posés par l'application d'un facteur dynamique aux machines. Et je crois pouvoir affirmer que le monde mettra probablement plus d'une siècle à réaliser l'effective adaptation des esprits aux conséquences énormes entraînées par l'application de la technique scientifique intellectuelle à la vie individuelle et aux relations sociales.

C'est seulement de nos jours que le commun des hommes a commencé à faire marcher sa propre radio, à conduire lui-même son automobile et, par suite, grâce à l'habitude et à l'exercice quotidiens, à penser intelligemment et objectivement en termes de mécanique. Il apprend ainsi, par exemple, que le jour où sa Ford est démolie, il est généralement superflu de flanquer de grands coups dans le radiateur, encore qu'une des faiblesses de la construction veuille qu'une bonne secousse, parfois, suffise à la remettre en forme. Mais, dans ses relations avec ses semblables, notre homme moyen demeure encore largement irrationnel. Ses réactions sont d'ordre émotif ou instinctif plutôt qu'analytiques et réfléchies. Il faudra plusieurs générations pour entraîner ses chefs à ce que je voudrais appeler la véritable technique pure des situations humaines difficiles. Il faudra, nécessairement, plus de temps encore pour que cette école en action ait pour effet de créer, dans l'esprit de ceux qui leur sont soumis, des points de vue similaires. Une économie complètement rationalisée ne peut être conduite que par des êtres humains préparés eux-mêmes à être complètement rationnels.

Il ne serait, toutefois, peut-être pas inutile, dans le temps dont je me trouve disposer encore, de m'essayer à montrer comment ces expériences partielles dont nous avons le témoignage, pourraient servir à anticiper le tableau de l'industrie scientifiquement organisée de l'avenir. Une telle tentative est évidemment, en partie, une oeuvre d'imagination et participe de ce caractère abstrait de la théorie, si impopulaire auprès des hommes pratiques. Mais, en vérité, l'un des changements vitaux les plus nécessaires à apporter dans la mentalité des chefs de notre vie économique réside dans l'abandon de cette fausse antithèse entre la pratique et la théorie.

L'une des leçons les plus importantes à dégager des expériences actuelles

dans l'organisation scientifique du travail, c'est que cet art du "management", cette organisation de grands corps composés de nos semblables, constitue un art qui doit être fondé sur l'étude et l'examen intellectuels des sciences secondaires s'y rapportant, étude conjuguée avec ce pouvoir d'expression synthétique qui est la marque distinctive de toute capacité réelle, en opposition avec la simple facilité académique. C'est ce dont, dans une certaine mesure, se sont déjà rendu compte ceux qui étudient pratiquement l'organisation moderne des entreprises économiques. Au cours de ces seules dernières années, j'ai trouvé dans des publications américaines des phrases telles que les suivantes: "Ces chefs d'entreprise qui sont si totalement dénués de vision qu'ils aiment à se faire passer pour des gens pratiques....", ou encore: "La pratique est statisme, mais la théorie est dynamisme. Toutes les améliorations, tous les progrès viennent de ce qu'un individu a imaginé quelque nouvelle combinaison de forces ou une façon nouvelle d'accomplir une tâche coutumière or imaginer, c'est édifier une théorie".
Que cela me serve d'excuse pour venir vous parler de ce qui, dans les conditions existantes, ne peut encore être que "l'industrie d'un rêve".

Tout d'abord, ayant reconnu que l'objet de toute industrie doit être d'assurer des biens ou des services à la communauté avec une perte minima de matériel et d'effort, nous devons nécessairement examiner, et particulièrement à ce point de vue, les relations fondamentales de ceux qui se trouvent appelés à exercer le contrôle de cette industrie. La nouvelle édition de "Payment of Wages", par M. G. D. H. Cole, contient, sur l'organisation scientifique du travail, un chapitre où il est dit: "Dans la mesure où l'organisation scientifique du travail constitue une doctrine, celle-ci repose sur la croyance que l'organisation industrielle est une science exacte et que le gouvernement de la loi naturelle doit remplacer, à l'usine, le règne de la force et de l'opinion.... C'est contre ce point de vue que je m'élève. Je soutiens énergiquement qu'aucune sphère de l'action de la conduite humaine ne saurait être ramenée à la mesure d'une science exacte. Je soutiens qu'en politique le "self-government" est une bonne chose, non pas simplement parce qu'il incite au "rendement" (efficiency), mais parce qu'il est le "self-government", et je soutiens, j'estime que, dans toutes les sphères de l'activité humaine, le "self-government", l'autonomie sont bons en soi, parce que la plus haute des fins humaines réside précisément dans le gouvernement de soi-même".
Nous trouvons dans cette phrase ce qui pourrait paraître constituer la différence fondamentale de point de vue entre les penseurs démocrates et ceux qui aspirent à une organisation scientifique de l'industrie. Mais on peut se demander si cette antithèse apparente n'est pas dans les mots plus que dans les choses. Quand nous disons qu'une industrie scientifiquement organisée est une industrie comportant une perte minima d'efforts à la fois et de matériel, nous impliquons dans cette formule celles des pertes qui résulteraient de formes d'organisation nuisibles à l'esprit humain. Acceptons l'affirmation de M. Cole, à savoir que le gouvernement de soi-même, en politique, est bon parce qu'il est le gouvernement de soi-même. Cela ne changera rien au fait que nous puissions désirer, comme un idéal, que ce gouvernement de soi par soi se trouve être réglé, non pas selon des émotions et des instincts

obscurs, mais conformément à ce qui serait la lumière, chez chacun de nous, d'une conscience complète et scientifique de soi-même. Sur ce même sujet, M. Cole écrit encore: "Les démocrates ont affirmé que si les experts et la science ont leur place dans le gouvernement, il n'en résulte pas que la vie sociale de l'homme soit matière de science abstraite; pour eux, elle est, au contraire, matière de volonté positive." Je dois avouer ne pouvoir entièrement approuver les qualifications de M. Cole. Il n'y a pas de raison pour que le science soit toujours abstraite. Et la volonté des gouvernés n'est pas non plus invariablement positive. Dans l'état actuel de notre civilisation, elle a plutôt la déplorable habitude de se montrer purement négative.

Mais le point essentiel qui paraît échapper à M. Cole, indépendamment de la possibilité, pour chaque individu, d'adopter un point de vue scientifique à l'égard de soi-même, réside dans le fait que l'organisation même qui se trouve permettre au "self-government" de se manifester, doit être l'objet d'une étude inspirée par l'esprit scientifique, si l'on veut qu'une pratique satisfaisante en résulte. Tous ceux qui étudient l'organisation scientifique du travail reconnaissent, cela va sans dire, que, dans l'état actuel de leur développement, les sciences physiologiques et psychologiques ne nous ont fourni aucun guide certain de la conduite humaine. Dans certains domaines, elles peuvent procurer à l'homme d'état ou à l'administrateur des données vraisemblablement déjà beaucoup plus exactes que les opinions fondées sur sa simple expérience personnelle limitée. Mais il faudra encore beaucoup de temps avant que leurs conclusions puissent être admises comme constituant une base d'action complète dans une question sociologique quelconque.

Mais cela ne modifie en rien le fait qu'à l'égard de cet ordre de questions, l'homme d'état et l'administrateur peuvent corriger les limitations reconnues du "jugement humain" (terme que je préfère à celui de "volonté positive" employé par M. Cole), en adoptant l'attitude d'esprit et la technique pratiquée par les hommes de science. Un admirable exemple nous en est offert par le cas dont M. Cole invoque l'analogie en discutant l'organisation scientifique de l'industrie, à savoir la place de l'expert dans le "self-government" politique. Nous ne sommes qu'au début de l'étude comparative des problèmes analogues élaborés dans les différentes sphères de l'organisation humaine, mais il n'y a point de doute qu'une masse considérable d'expérience, attendant l'analyse, n'existe déjà dans ce cas particulier. De toute évidence, il y a quelque part un point d'équilibre entre la contribution que l'expert peut apporter à la solution d'une question quelconque et, par ailleurs, l'inconvénient de retirer une trop grande part d'initiative à ceux des autres membres de l'organisme intéressé qui ne sont pas eux-mêmes spécialisés dans le domaine propre de l'expert. Dans la mesure, toutefois, où nous pouvons en juger à présent, la tendance générale de notre civilisation actuelle est orientée vers une subdivision du travail toujours plus grande et vers le perfectionnement toujours plus subtil des corrélations fonctionnelles au moyen desquelles ces divers experts peuvent se trouver unis ensemble et travailler en vue d'un objectif commun.

Un exemple précise de ce genre de travail scientifique dans le plan même auquel je me trouve actuellement faire allusion, nous est offert par le célèbre chapitre de la "Démocratie industrielle", où les Webbs ont exposé et discuté l'expérience des Trade Unions britanniques quant aux relations

entre les membres et les fonctionnaires, entre les syndiqués et leurs organes exécutifs. Ils montrent comment, de cas particulier en cas particulier, le principe démocratique élémentaire selon lequel tout détenteur d'une charge exécutive relèverait de l'élection populaire périodique et directe, a dû céder devant la logique des choses. Pratiquement, ce principe a cessé d'être appliqué, et la raison en fut en partie qu'une telle méthode entraînait une situation intolérable pour les fonctionnaires de syndicats considérés comme les serviteurs salariés des Trade Unions. De plus en plus, on a eu tendance à reconnaître qu'en ce qui concerne les administrateurs permanents, ceux-ci ne devaient pas être soumis à l'élection directe, mais désignés par un organe administratif collectif, lui-même élu par le peuple.

Ce que je veux faire entendre, c'est que dans cette question fondamentale d'une part de contrôle à accorder aux ouvriers dans le fonctionnement de l'industrie, les sciences relatives à l'administration et à l'organisation comparée auront, dans l'avenir, beaucoup à dire. Il est impossible de concevoir que de grandes collectivités humaines puissent être efficacement organisées pour la production sous le signe de méthodes de contrôle faisant violence à leur sens de la justice. Si les "simples soldats" des industries de l'avenir ont le sentiment de devoir, comme individus et comme citoyens raisonnables, participer au contrôle des industries dans lesquelles ils travaillent, il sera tout à fait essentiel que cette part de contrôle leur appartienne, faute de quoi on verra se produire une perte, un gaspillage psychologique considérable, et les industries ne répondront pas à notre définition.

Mais, d'autre part, les méthodes selon lesquelles on pourra réaliser une telle participation au contrôle, de même que les différents mécanismes établis et les relations existant entre les ouvriers participant au contrôle et les administrateurs ou spécialistes de toutes sortes, seront indubitablement déterminés, dans une large mesure, par les résultats provenant d'une étude objective et comparative des diverses expériences tentées et de l'expérience en général, non seulement dans l'industrie, mais encore dans quantité d'autres domaines de l'activité humaine. Je suis complètement d'accord avec M. Cole pour penser que le "self-government" est, en lui-même, une bonne chose. Mais je crois qu'il est une bonne chose parce qu'il constitue la méthode la plus sûre et la plus rapide d'amener la masse des travailleurs industriels à adopter une forme de pensée, un état d'esprit d'ordre scientifique. C'est seulement lorsque les hommes ont une part de responsabilité dans une action qu'ils se trouvent mis directement en relation avec les conséquences de cette action. Aussi le gouvernement par les gouvernés est-il, en lui-même, l'a. b. c. de l'éducation scientifique, car il relie directement la cause à l'effet et soumet ceux qui l'exercent à la dure discipline des faits. Il n'y a pas contradiction entre une industrie scientifiquement organisée et une industrie jouissant d'une large mesure de "self-government" de la part de ses ouvriers, à condition que les mécanismes destinés à réaliser et à exprimer ce gouvernement des gouvernés par les gouvernés fassent eux-mêmes l'objet d'une investigation scientifique.

La seule condition fondamentale qu'ils aient à remplir est d'éviter une perte d'effort, ce qui implique également les pertes d'ordre psychologique dues à une intervention déraisonnable ou ignorante auprès de ceux dont la fonction est d'organiser et d'administrer. Un récent observateur a noté

que le mécanisme économique du gouvernement de Moscou est le plus lent et le plus pesant du monde. Le but de l'activité économique est la production de marchandises ou le prestation de services à un prix minimum pour la communauté, et non la création de sociétés délibérantes, aux frais de tout le monde.

Si nous nous tournons vers le second grand partenaire du mécanisme industriel, le capital, nous trouvons dès maintenant une situation anormale. Théoriquement, et dans une large mesure légalement, le contrôle d'une industrie quelconque appartient à ceux qui ont fourni le capital nécessaire à son existence. En fait, il en va tout autrement. Sous la loi de la responsabilité limitée dans les pays industriels, l'actionnaire exerce bien, en principe, ce droit de contrôle en ce qu'il a, juridiquement, la faculté de désigner et de congédier les administrateurs, et l'occasion d'exprimer ses critiques à certains intervalles fixes. Mais en réalité, un ensemble de causes diverses ont contribué à annuler tout exercice efficace de ce droit de contrôle. Une masse toujours croissante du capital industriel se trouve représentée sons forme d'actions de priorité dont tout droit de contrôle est expressément exclu. Les informations données aux actionnaires sont, dans la plupart des cas, beaucoup trop maigres pour permettre une critique efficace et elles sont fournies beaucoup trop "après coup" pour former une base d'action de sa part. La pratique d'établir des "holding companies" et autres systèmes de propriété conjuguée complique les faits au point de rendre impossible toute discussion utile de la part d'un profane. Pour la désignation des administrateurs, il n'y a généralement point d'autre alternative que d'accepter la nomination du groupe déjà existant.

L'actionnaire, de son côté, a contribué au processus qui l'a privé de son contrôle théorique. De plus en plus, il s'est montré disposé à accepter un titre rapportant un taux d'intérêt fixe, particulièrement un taux fixé et cumulatif, quelque illusoire que fût, d'ailleurs, la sécurité supplémentaire de ce titre en tant qu'action de priorité. Celle-ci est en elle-même une déclaration par laquelle l'actionnaire reconnaît chercher davantage à faire rapporter son capital plutôt que de participer effectivement à la vie industrielle; pour peu qu'il soit d'un tempérament moins actif que spéculatif, il y a toutes les chances pour qu'il vende sur le marché les actions qu'il possède sans se soucier d'exercer les droits de contrôle qu'il peut encore avoir, s'il vient à penser que les choses ne marchent plus de façon satisfaisante. Enfin, le croissance, au cours de ces dernières années, des "investment trusts" (trusts de placemen) a fourni à l'actionnaire ordinaire une nouvelle possibilité de se décharger de la maigre part de responsibilité dans l'exercice du contrôle auquel il pouvait encore préfendre.

On peut constater que la thèse de beaucoup de socialistes, selon laquelle les travailleurs de l'industrie, y compris les administrateurs, devraient louer le capital, et non pas le capital louer les travailleurs, a été partiellement et pratiquement réalisée. Je considère comme inévitable qu'une industrie scientifiquement organisée reconnaitra dans l'avenir un pareil fait, en théorie et en droit aussi bien qu'en pratique, et que fournir de l'argent et exercer un contrôle constitueront deux fonctions distinctes et indépendantes. On louera du capital comme on loue n'importe quelle autre chose utile. Mais ce capital n'entraînera pas nécessairement un droit, même

théorique, de contrôle ni, sauf dans certains cas exceptionnels, une priorité sur un surplus de rapport, au-delà et au-dessus d'un taux normal d'intérêt. Ces cas exceptionnels seront naturellement les industries nouvelles ou présentant un caractère nettement spéculatif, dans lesquelles un profit exceptionnel apparaitra comme nécessaire afin d'amener les bailleurs de fonds à accepter les risques exceptionnels courus. Mais il conviendrait alors de mentionner expressément que ce profit exceptionnel, loin de participer du principe traditionnel posant que le capital possède un "droit" sur la totalité du surplus, représente uniquement la somme, scientifiquement calculée, de stimulus nécessaire à rassembler les fonds indispensables, vu le degré des risques impliqués dans chacun des cas en particulier.

Cette analyse de la situation, en ce qui concerne le capital et sa part de contrôle, soulève un autre problème. S'il est vrai que, dans une large mesure, l'argent investi dans l'industrie n'exerce pas, aujourd'hui, de contrôle efficace sur cette dernière, deux questions se présentent à l'esprit.

Tout d'abord, qui, contrôle, en fait, l'industrie? Sans aucun doute, le droit légal de prendre les décisions majeures de l'administration tend à appartenir de plus en plus à de petits groupes d'entrepreneurs financiers disposant de deux facultés spéciales, celle, d'une part, d'être habiles à persuader le public de leur confier son argent et, d'autre part, le don de se trouver exceptionnellement avisés ou bien encore assez heureux pour placer cet argent dans des entreprises de producton d'où l'on pourra tirer un rapport satisfaisant. Il est incontestable que des intermédiaires de ce genre remplissent souvent un rôle extrêmement utile dans la communauté économique: ils dirigent le flot de l'argent dans des canaux profitables et exercent une critique fréquemment salutaire sur ceux qui se trouvent effectivement engagés dans l'organisation de la production. D'un autre côté, on peut relever deux sources de pertes dans ce système. Le public demandant généralement des profits rapides, ceux-ci ne correspondant pas toujours avec les périodes plus longues des exigences industrielles - les branches commerciales ou les groupements industriels qui ont le plus besoin de capital, pour leur rééquipement ou leur réorganisation, offrant les perspectives les moins favorables quant à un rendement immédiat. En second lieu, la préoccupation essentielle du financier-administrateur portant sur la puissance de rapport des entreprises auxquelles il est intéressé, donne une importance trop grande aux côtés financiers de son travail administratif, et l'amène à négliger un point de vue plus haut et de plus longue portée quant à l'efficacité administrative et organisatrice de son oeuvre. Une critique d'ordre officieux est impossible de la part du bailleur de fonds ou de l'actionnaire, étant donné l'abandon de leurs fonctions de contrôle. Et les groupes de financiers-administrateurs s'élisant et se perpétuant eux-mêmes en fait, toute forme de critique adéquate fait presque entièrement défaut.

Le second point dont je désire faire remarquer l'importance est le suivant. S'il est exact qu'on a permis à la fonction de critique et de contrôle de l'actionnaire de s'atrophier, l'analyse scientifique montre-t-elle que cette fonction était superflue, ou simplement que les mesures adoptées pour son exercice n'étaient pas adaptées à cette fin? Je pense qu'un examen objectif des faits industriels et, de même, une étude comparative d'autres

organisations, fera voir d'une façon précise que cette fonction de critique et de révision forme une part désirable de toute structure administrative aspirant à la santé. S'il en est ainsi et que l'actionnaire soit incapable ou insoucieux de l'exercer efficacement, il s'ensuit que, dans une industrie scientifiquement organisée, cette fonction devra être confiée à un autre organe ou, en tout cas, être organisée de quelque autre manière.

Pour résumer cette section du "rêve", je dirai que l'industrie scientifiquement organisée de l'avenir:

impliquera nécessairement un degré considérable de contrôle de la part des travailleurs, mais le mécanisme et les formes de ce contrôle correspondront aux résultats de la science administrative comparée plutôt qu'aux préconceptions politiques, quelles qu'elles soient;

réunira le capital nécessaire à l'exploitation de ses entreprises tout à fait indépendamment de toute question de contrôle, sauf dans le cas d'entreprises exceptionnellement spéculatives et nouvelles;

remplacera les importantes fonctions de l'actionnaire quant à la critique et à la révision de l'administration, fonctions qui se sont désormais atrophiées, par d'autres mécanismes imaginés à cette fin;

sera, dans la question plus vaste de la direction et de l'afflux du capital, sujette à un certain degré de direction ou tout au moins d'influence centralisée, sur une base soit nationale soit internationale.

Je voudrais insister sur le fait que cette "prophétie" ne constitue pas un essai de parler politique. Je ne dis pas que ces mesures seront bonnes ou mauvaises pour la vie industrielle. Je ne pense pas que nous ayons assez d'éléments d'information pour juger de leurs résultats. J'indique seulement qu'un examen objectif, à la lumière du principe de moindre perte, des éléments donnés fait entrevoir une perspective de cet ordre. J'ai appelé mon exposé un "rêve", mais c'est un rêve basé sur des fragments de réalité empruntés à des zônes diverses du monde économique. "Le contrôle par les ouvriers" a longtemps été un lointain idéal de la politique syndicale dans différents pays. Mais les expériences russe et italienne, non moins que les tendances plus réalistes, auxquelles j'ai fait allusion, de la pensée socialiste, montrent que l'application de cet idéal et ses réactions sur l'„efficiency" administrative seront étudiées avec le soin le plus minutieux, notamment par les représentants des ouvriers eux-mêmes. D'ici là, il y a abondance de données et d'expériences à extraire des diverses entreprises.

L'appel de nouveau capital sans la moindre part de contrôle attachée à l'argent, est déjà un fait accompli dans de vastes domaines de l'activité économique. Le remplacement de la fonction de critique et de révision, de la part de l'actionnaire, par d'autres mécanismes a fait l'objet d'expériences, notament dans le cas du Comité des Actionnaires de la Dennison Manufacturing Co. Inc., de même que dans différents systèmes tendant à permettre une critique régulière exercée par les travailleurs. L'idée d'un contrôle public de la direction et de l'afflux du capital a été exprimée en Grande Bretagne dans la proposition, formulée par l'Enquête Industrielle Libérale, d'un Office de Placement National: elle correspond aussi à l'idée qui a inspiré une grande part de l'oeuvre accomplie par le Federal Reserve Board.

La technique scientifique reposant essentiellement sur la pleine connais-

sance des faits, il est vraisemblable que les éléments contrôlants de chaque entreprise ou industrie, quelle que soit leur nature, devront, dans l'avenir, exiger et produire un nombre de données et de chiffres généraux constants, ayant trait à leurs opérations, infiniment plus considérables que jusqu'à ce jour. Ce fait aura lui-même une conséquence psychologique immense, à la fois sur les relations de tous ceux qui participent à l'industrie et, en outre, sur l'attitude des personnes chargées de l'administration. L'obscurité et la malpropreté, le secret et l'égoïsme sont des plaies jumelles. L'administrateur honnête ne craint ni n'évite le plein jour. Comme le remarquait récemment un publiciste anglais, "la publicité engendre la liberté dans la mesure de sa propre existence".

Nous éloignant des questions de finance et de contrôle, abordons maintenant les autres mécanismes que doit établir une industrie si elle veut faire présider une organisation "scientifique" à sa propre destinée.
On admet parfois que la Rationalisation implique nécessairement la "trustification", la création de très grandes unités de contrôle sous une possession unifiée. D'après les expériences jusqu'ici réalisées, je ne suis pas du tout sûr qu'il en aille ainsi ni dans chaque cas d'une même industrie ni dans la majorité des industries en général. Il est clair que l'existence, dans une industrie, d'un grand nombre de petites unités concurrentes n'ayant ni politique ni programme communs, conduit à de grandes pertes et à de grands manques d'efficacité. Mais, d'autre part, nous avons, je crois, beaucoup à apprendre en ce qui concerne les difficultés administratives d'organiser ces plus grandes intégrations sous un contrôle unifié. A l'heure actuelle, il n'y a que peu ou même point du tout d'étude objective des principes impliqués par ce travail, dans la mesure où ils concernent l'industrie. Mais les remarques d'un grand nombre de grands industriels constituent une mine de renseignements en ce qui concerne les insuffisances de l'administration publique. Ce qu'il s'agit maintenant d'établir, c'est dans quelle mesure ces insuffisances sont réellement fonction de la forme de propriété de l'entreprise et dans quelle mesure elles représentent le réaction normale de la nature humaine par rapport à l'organisation, lorsque celle-ci a dépassé un certain niveau de croissance. Il est clair, même pour l'observateur profane, que les entreprises et les services industriels modernes, établis sur une grande échelle, ne sont pas entièrement dépourvus de certains des vices traditionnels de la bureaucratie. Nombre de réseaux de chemins de fer appartenant à des compagnies privées en fournissent un exemple.
En outre, tout observateur impartial doit être impressionné par le caractère des expériences que M. Hoover a réalisées aux Etats-Unis. L'exigence d'une propriété ou d'un contrôle unifié se fonde essentiellement sur cette idée qu'il est impossible d'assurer une action ou une adhésion commune à un programme commun sans avoir recours à la force. Mais il devient plus clair chaque jour que les bornes de l'autorité sont strictement fixées. L'histoire du XVIIIème Amendement en est un exemple frappant. Il est tout à fait caractéristique de la philosophie de M. Hoover qu'il ait basé sa campagne pour améliorer cette situation, non point sur un accroissement des sanctions légales et des mesures de police, mais sur une croisade morale définie, sur une tentative de gagner l'opinion publique et de la faire servir à soutenir la loi.
Que le président Hoover doive triompher ou ne pas triompher dans cette

campagne, il est surabondamment évident qu'il a réalisé un succès très élevé dans ses efforts pour unir les hommes d'affaires dans une plus claire appréciation de la valeur d'une politique commune. Ses diverses tentatives, au département du Commerce, en vue de la standartisation et de la simplification dans un grand nombre d'industries, de même qu'en faveur d'un usage plus intelligent de la statistique pour servir de frein à une production excessive, ses efforts, enfin, pour développer des méthodes nouvelles, fondées sur une meilleure information, de fournir les marchés intérieurs et étrangers, ont acquis une célébrité mondiale. Mais, dans aucun cas, il n'y a eu d'éléments de contrainte ni de sanction légale. Le procédé employé a été plutôt une méthode de pression éducative énergique, une inexorable présentation des faits. Les hommes d'affaires ont appris à se soumettre, non à la loi du pays, mais à la loi beaucoup plus impérieuse de la situation.

Je dirais que les recherches ultérieures sur la question de l'unité de contrôle montreront probablement que cette dernière se réduit presque complètement à une question de technique. C'est à dire que, pour chaque produit et pour chaque industrie, on découvrira qu'il existe une unité de grandeur correspondant scientifiquement à un maximum d'efficacité - autrement dit à un minimum de perte - et que cette unité se trouvera varier avec les différentes fonctions, à l'intérieur de chaque industrie. Ce qui veut dire que la grandeur de l'unité de contrôle la plus favorable à des buts productifs variera de celle qui convient le mieux, aux exigences de la distribution, ou encore de l'unité la plus conforme aux besoins financiers. Et l'une des exigences fondamentales d'une indusrtie scientifiquement organisée sera l'existence d'un service de recherches adonné à l'étude de ce problème spécifique et soutenu par un fond commun souscrit par l'industrie.

Un tel service centralisé ne saurait, toufetois, accomplir un travail raisonnable et effectif sans une grande abondance de matériaux statistiques relatifs aux diverses unités dans l'industrie. Et de tels matériaux, si l'on veut qu'ils fournissent une base à des conclusions scientifiques, doivent être strictement comparables entre eux, ce qui nous amène nécessairement à standartiser les méthodes d'évaluation des prix et de comptabilité. Mais, ici encore, je dirai que la pression morale et la fierté professionnelle sont plus fortes que la contrainte. La Fédération des Maîtres Imprimeurs de Grande Bretagne applique un tel système depuis plus de cinquante ans. Ce fut un immense bienfait pour cette industrie. L'avilissement des prix a été pratiquement éliminé. Plus de 80 % des entreprises de cette branche ont adopté le système commun. Mais il n'a été exercé aucune contrainte.

De ce qu'on a déjà dit, il ressort clairement qu'une industrie scientifiquement organisée aura en outre une certaine méthode de traiter la simplification et la standartisation dans leur ensemble, de même que les statistiques en vue d'éviter la surproduction au-delà de ce que le marché pourrait supporter. Ce dernier point soulève naturellement le problème central de la rationalisation : l'ajustement de l'offre à la demande potentielle.

Il faut distinguer ici les industries où la quantité de la production totale dans n'importe quelle période dépend de l'intention et de l'effort humains, et celles se rapportant à un produit naturel, où les fluctuations d'une

récolte peuvent renverser tous les calculs. Il existe, naturellement, un préjugé invétéré, encore que décroissant, contre toutes les tentatives de limiter la production pour stabiliser les prix. Parmi des consommateurs qui, depuis un siècle, ont toujours entendu dire que la concurrence est leur seule garantie contre l'exploitation, ce fait n'a rien de surprenant. La conséquence immédiate d'un excès de production dans quelque domaine que ce soit est une chute prononcée des prix sur tout le marché. Le consommateur recueille un bénéfice tangible, pendant une courte période. Mais si la chute est assez grave pour détruire la marge de profit d'une vaste couche de producteurs pendant plus longtemps qu'une courte période, on peut se demander si le consommateur recueille, en fin de compte, le moindre bénéfice réel. Pareil trouble, dans l'industrie, doit se payer, tant par des pertes de capital que par la ruine d'un certain nombre d'entreprises, le chômage, la stagnation des activités commerciales voisines ou subordonnées. Et, en dernière analyse, la seule source d'où puisse provenir cette compensation est la poche du consommateur lui-même. Ceci n'est qu'un aspect de la conception des "hauts salaires". De même que le produit de l'industrie ne saurait être consommé si l'industrie ne fournit pas la somme nécessaire de salaires et de dividendes, de même on ne saurait remplacer un capital perdu ni remettre en mouvement les rouages d'une industrie frappée par une crise, qu'en faisant appel aux profits réalisés sur le consommateur. Le moyen d'une baisse progressive des prix pour le consommateur n'est pas dans de brusques poussées de surproduction entraînant une chute rapide des prix, mais il réside dans une stabilité du marché assez assise pour permettre aux unités les plus efficientes d'accroître leur pouvoir de rendement de façon progressive, grâce à l'élaboration d'un plan établi d'avance et à de hardis placements réalisés dans leur équipement.

Dans le cas des produits naturels pouvant être emmagasinés, on a dit qu'il serait nécessaire d'avoir recours à un système d'accords pour les marges ou même à des arrangements permettant de collaborer sur la marché, si l'on veut donner à la production une base scientifique. Mais les faits montreront peut-être qu'il serait suffisant que les producteurs s'unissent dans une manière d'assurance mutuelle couvrant les risques d'une récolte excessive, exactement de la même façon qu'on assure un risque normal. Je pense, ici, à l'exemple de l' "Irish Dairy Indusrty" de M. Fox.

En matière d'articles manufacturés, il faut envisager deux cas distincts. En primier lieu, il y a l'industrie dont la capacité productive existante dépasse les exigences de son marché réel. Deux voies lui sont ouvertes: réduire ses investissements d'installation et d'équipement ou agrandir son marché. La tendance actuelle en Europe est toute dans la première direction. Et il est de fait qu'une concentration et une spécialisation réfléchies des installations, avec élimination des producteurs les plus faibles, peut être nécessaire pour rendre la santé à une industrie ayant souffert de troubles économiques. Mais on devrait toujours se souvenir que la santé aurait dû commencer par ne pas être perdue. L'existence de producteurs "inefficients" dans une industrie prouve celle d'un certain nombre de fabriques qui n'ont pas été scientifiquement orgaisées et qui n'ont pas, plus particulièrement, consacré une proportion convenable des bénéfices anciennnement réalisés au renouvellement de leur équipement. Comme l'a dit M. Garrett, dans son admirable petit livre "The American Omen",

"la surproduction est un symptôme de vieillissement". Ce point est un de ceux que, dans l'avenir, une industrie plus scientifiquement organisée observera de très près. C'est un des paradoxes de la vie économique que l' "inefficience" de l'un des concurrents est beaucoup plus dangereuse, à la longue, que son contraire.

La seconde voie possible, celle de l'élargissement du marché, se montre plus conforme aux méthodes d'une économie scientifique. J'ai le sentiment que c'est la reconnaissance presque inconsciente de ce fait qui amène la Grande Bretagne à hésiter, dans le phase actuelle, entre une politique économique orientée vers l'Europe et une méthode tendant au développement de ses ressources impériales. La création de l' "Empire Marketing Board" représente une tentative consciente de favoriser l'accroissement du marché dans cette voie. Une autre direction, dans laquelle ce même accroissement pourrait être favorisé, serait de développer de nouvelles possibilités d'utilisation pour les produits de l'industrie ou même de créer de nouveaux besoins que cette dernière serait à même de satisfaire. L'industrie scientifiquement organisée de l'avenir ne lésinera certainement pas sur les fonds nécessaires à l'entretien de services statistiques se rapportant à ces matières ni sur les subventions à accorder aux recherches spéciales combinées concernant la technique ou l'étude du marché, avec, éventuellement, combinaison de publicité.

Il me semble que ces services statistiques portant sur le pouvoir producteur général de l'industrie devront automatiquement s'occuper de la seconde alternative, celle de la menace constante de surproduction résultant de l'entrée de nouvelles entreprises dans le branche industrielle considérée. Un contrôle véritablement scientifique ne cherchera pas à s'opposer directement à ce genre d'entrées. Il considérera qu'une sécurité trop grande ne présente pas moins de dangers qu'un trop grand trouble. Les industries peuvent être victimes du confort, devenir, pour ainsi dire, obèses. Il est favorable à un standard croissant d'efficacité qu'il puisse y avoir un courant équitablement constant de nouveaux-venus sérieusement préparés à produire à des prix inférieurs au niveau général prévalant dans l'industrie. Mais leur préparation devra être sérieuse. Ce que je veux dire, c'est que les hommes n'entrent pas délibérément et volontairement dans un champ industriel donné, où une production adéquate existe déjà, à moins que le taux des profits réalisés ne soit excessif ou le niveau général d'efficacité extrêmement bas. Mais dans la grande majorité des cas, ils s'y aventurent sans avoir la moindre idée de sa capacité effective de production. Je crois qu'une industrie scientifiquement organisée mettra à la disposition du nouvel arrivant des informations statistiques complètes concernant ces différents points. Et dans certains cas, le nouvel arrivant ne se présentera même pas. Les hommes ne choisissent pas des placements risqués par mauvaise volonté, mais par ignorance.

Il me faut songer à conclure. Un simple exposé ne saurait évidemment faire plus que d'effleurer les abords d'un si vaste sujet. Je n'ai rien dit des mécanismes qu'une industrie scientifiquement organisée établira pour l'étude conjointe de ses problèmes touchant l'occupation des travailleurs, les conditions du travail ou sa rénumération, etc. Répétons-le, le champ de l'action coopérative est ouvert tout entier aux recherches sur les problèmes techniques et humains de l'industrie. Nous avons déjà nombre d'expériences suggestives s'y rapportant. De même, je n'ai rien dit non

plus du programme individuel. Dans chaque usine moderne on rencontre un grand nombre de fonctions specialisées. Chacune de ces fonctions doit être soumise, dans chaque établissement, à la technique scientifique. De plus, il faut considérer les principaux aspects de la vie laborieuse de l'individu sur lesquels il conviendra de faire porter de nouvelles recherches et expériences, si nous voulons éviter les pertes et le gaspillage, c'est à dire recruter la pleine énergie potentielle de l'individu au service de la communauté. Le point essentiel sur lequel j'ai essayé d'insister est qu'une grande part de notre pensée actuelle, en ce qui concerne les mécanismes de la rationalisation, est influencée par les vieilles idées de force dans la vie économique. Une analyse plus scientifique de la notion de contrôle montrera, j'en suis persuadé, à quel point sont limitées les possibilités pratiques de faire usage de la force. En tout cas, nous avons devant nous un champ infiniment vaste dans le développement de cette nouvelle méthode d'envisager les problèmes économiques, que nous appelons la rationalisation.

Mais si vaste qu'en soit l'étendue, ce champ est, à mon sens, un champ de possibilités et d'espérances infinies. Considérez à quel point l'idée est nouvelle. Songez un instant à la révolution qu'elle a déjà amenée dans une grande part de la pensée économique du monde - j'en citerai comme exemple les remarques faites par M. Ford et par les chefs des "General Motors" aux journalistes avides de recueillir des détails sur une lutte entre concurrents, dramatique, mais destructive. Représentez-vous combien l'ancienne conception fataliste de la concurrence nous amenait non seulement à nier toute responsabiilté pour l'établissement d'un ordre conscient dans la vie économique, mais enfermait chacun dans une muraille de secret et d'hostilité, de telle sorte que non seulement les faits les plus simples et les plus élémentaires manquaient à la formation d'un jugement raisonné sur les matières économiques, mais que toute cette inspiration morale et intellectuelle qui vient de la discussion ouverte avec nos collègues était en outre refusée à l'homme d'affaires. Ce n'est pas en vain que quelques-uns des groupes formés récemment dans différents pays, parmi les industriels, pour la discussion mutuelle des problèmes communs d'organisation, ont été appelés "les universités de l'homme d'affaires".

Et l'influence n'en sera pas limitée au seul plan économique. Je crois que ce grand et nouveau pas en avant dans notre pensée à l'égard des choses matérielles, est appelé à avoir des réactions sur l'ensemble de notre vie civilisée. C'est lui qui nous a déjà réunis ici, à Elmau. Il y a quatorze ans aujourd'hui je luttais pour mon existence comme un animal, près des écuries du Château de Hoogue, peut-être avec quelques-uns de ceux qui sont ici présents. L'organisation de la prospérité matérielle est l'un des grands intérêts communs de l'humanité, où le domaine de mutuelle interdépendance dépasse déjà de beaucoup les possibilités d'isolement national. Il n'est pas possible qu'en en considérant les problèmes plus rationnellement - c'est à dire avec moins de crainte les uns envers les autres, moins de superstition, moins de cruauté - nous ne devions pas aussi voir plus clairement le moyen de réaliser une entente sur ces questions politiques qui divisent les nations.

EXPOSÉ TERMINAL PAR MARY VAN KLEECK, VICE-PRÉSIDENTE DE L'I. R. I., DIRECTRICE DES ÉTUDES INDUSTRIELLES À LA FONDATION RUSSELL SAGE, NEW YORK.

Dans le divin mécontentement des travailleurs, réside une puissance capable de contribuer à résoudre le grand problème d'avenir de l'humanité; le péril serait que cette puissance demeurât **la seule**. Cela a été dit à notre conférence par un employeur allemand.

Nous cherchons à établir une ligne commune de collaboration entre employés et employeurs, en favorisant l'organisation scientifique du travail et l'avènement de meilleurs relations industrielles. Cela a été exprimé à notre conférence par un ouvrier français, fonctionnaire d'une confédération nationale de syndicats.

Il a ajouté que nous pouvons découvrir cette ligne commune par la recherche des **lois éternelles** grâce auxquelles nous nous efforçons de savoir ce que c'est que la perfection, cette perfection qui réside dans l'harmonie, dans l'harmonie de la musique, dans l'harmonie également des lois de la nature qui expliquent l'éclosion d'une fleur comme elles permettent de comprendre la force de la gravitation. C'est cette recherche des lois éternelles qui peut nous montrer la route à suivre en vue de **libérer les forces créatrices de l'être humain**. Comme l'a dit Jaurès: "L'harmonie de l'effort humain multiplié doit et peut suppléer à la puissance du génie."

Une autre personnalité, qui n'est pas présente parmi nous, Madame Taylor, la veuve de Frédéric W. Taylor, dont les principes de rationalisation, résultant, tels qu'ils ont été formulés par lui, de son travail aux Etats-Unis, ont été maintes fois cités au cours de ces débats, a directement fait parvenir à cette assemblée, par les membres du bureau de l'Association qui l'avaient rencontrée à Paris, le suivant message: M. Taylor a toujours nourri la crainte que l'intérêt porté aux procédés scientifiques ne se développe plus rapidement que l'attitude intérieure. La préoccupation de Taylor fut, en effet, d'accroître le bonheur des ouvriers.

Or ces trois citations, empruntées à trois types différents de personnalités, au point de vue de leurs relations avec la vie industrielle - provenant, par conséquent, de trois types différents d'expérience, dans trois différents pays du monde, - ces trois témoignages me semblent présenter comme le résumé même de la présente conférence.

Mais nous avons beaucoup entendu parler de l'organisation fonctionnelle de l'industrie et, puisque ma fonction, à moi, paraître de tenter d'établir un résumé, je ne prétendrai pas m'y soustraire Cette fonction, je la conçois comme une tentative de traduire, avec des mots, les idées qui se sont manifestées à notre conscience commune. Pour essayer d'exprimer ces idées, je rappellerai l'exposé donné par Mlle. Fleddérus lors de notre seconde séance, sur les relations entre les groupes dans la vie industrielle. Ces relations entre groupes, a-t-elle déclaré, sont caractéristiques de notre vie collective actuelle, de même qu'elles permettent, comme prophétiquement, d'entrevoir le niveau plus élevé de vie collective vers quoi nous semblons tendre. L'interdépendance et l'interaction des différents éléments de la vie industrielle dans toute leur complexité nous donnent, - comme on l'a dit à notre congrès de Cambridge et comme

l'a rappelé Mademoiselle Fleddérus, - l'occasion de réaliser une attitude sociale hautement développée.

Qu'est-ce qu'une attitude sociale hautement développée? C'est la question à laquelle nous nous sommes efforcés de répondre, et on nous a proposé plusieurs termes devant servir, pour ainsi dire, d'étiquette ou de clés à notre nouvelle manière de penser relativement à l'industrie. Ce sont ces termes que je voudrais donner pour centre au présent résumé, en les groupant un peu différemment: ceux, d'abord, qui indiquent un état de choses dans la phase duquel nous nous trouvons peut-être déjà engagés, comme la production en masse; ceux, ensuite, dénommant une certaine forme de procédé ou de méthode pratique, - standardisation, rationalisation, mécanisation, combinaison; en troisième lieu, les termes désignant des attitudes et les formes dans lesquelles ces attitudes se manifestent, - collaboration, direction et standards; enfin, les mots correspondant à des activités, - tels que fonctionnel, constructif, dynamique.

Les relations humaines dans l'industrie existaient dans un cadre d'activités économiques, et il serait vain de vouloir examiner les relations humaines sans comprendre d'abord cette base première que constitue pour elles la structure de l'économie. Le monde, aujourd'hui, est nourri, habillé, logé, la société reçoit des services par l'effet d'activités tangibles et définies tendant à des manipulations de matériaux, de machines, à des installations et à l'établissement d'un résau de communications, toutes activités et manifestations de nature technique. C'est uniquement en concevant les relations industrielles à l'intérieur de l'ordre économique actuel que nous pourrons en créer de meilleures.

Il est déplorable que notre éthique ait été formulée dans une période beaucoup plus simple de l'histoire universelle, qu'elle n'ait pas encore reçu, de notre époque actuelle, une forme plus moderne, tandis qu'elle devrait avoir déjà pris son expression de demain; mais du moins devrions-nous réfléchir à ce que l'éthique de demain est appelée à être. Et pour ce faire, il nous faut avoir une représentation de ce que sera l'industrie de demain. C'est ce qui explique que nous ayons choisi pour sujet de nos discussions, non pas quelque construction insaisissable et idéale des lois de la conduite telles qu'elles devraient prévaloir entre les êtres humains, mais bien les méthodes propres à favoriser des relations humaines satisfaisantes dans une industrie scientifiquement organisée. En effet, nous avons voulu distinguer à l'avance les tendances et les courants impliqués par les nouvelles formes d'efforts actuellement tentés en vue d'augmenter la production et de produire mieux et plus efficacement, avec le minimum de gaspillage de matériel et de fatigue.

Naturellement, nous devons définir la forme sous laquelle se manifeste actuellement dans l'industrie le mouvement dit d'organisation scientifique. Je ne tenterai pas de discuter les définitions diverses de la rationalisation et de l'organisation scientifique, mais je me bornerai à décrire les efforts que ces termes symbolisent. L'organisation scientifique du travail est plus facile à décrire que ce vague mouvement dénommé rationalisation, l'organisation scientifique s'étant effectivement développée pendant des

années d'une patiente recherche qui lui a conféré sa précision de méthodes et de principes. Telle fut son histoire dans un atelier des Etats-Unis.

J'ignore si tous ceux qui ont entendu parler du système de M. Taylor se rendent compte que M. Taylor a consacré un quart de siècle à des recherches sur la façon de couper les métaux. Ce trait caractérise la nature de son esprit. Les principes de l'organisation scientifique se sont développés selon les méthodes lentes d'une découverte minutieuse. De ces recherches et de l'expérience fournie par des travaux de laboratoires appliquant une nouvelle méthode scientifique aux problèmes de l'usine, se dégagèrent certains principes présentés à cette conférence par l'un de nos membres, le Directeur de la Société Taylor aux Etats-Unis. Cette société possède là-bas un noyau de personnalités ayant directement travaillé avec Taylor.

Ces principes fondamentaux de l'organisation scientifique, tels qu'ils nous ont été décrits, sont au nombre de quatre:

La recherche, par la direction d'entreprise, de tous les problèmes et de toutes les méthodes la concernant, y compris la qualité des matériaux, la qualité et le type des outils à utiliser, de même que les méthodes et les formes de l'administration.

Le but des recherches est d'établir des standards de performance et des plans de procédés destinés à rester en usage jusqu'à ce que l'expérience ait fait voir l'opportunité d'établir de nouveaux standards; ceux-ci expriment la meilleure expérience du moment, déterminé par des faits indépendants du simple caprice ou du jugement, souvent erroné, des personnes directement engagées dans l'entreprise.

Le contrôle; celui-ci n'est pas un contrôle de l'autorité, mais du savoir, qui permet d'adopter les standards et les procédés établis par la recherche.

Enfin, la collaboration de tous les êtres humains engagés dans l'entreprise, par une organisation de leur travail permettant à chacun d'accomplir sa fonction de la meilleure façon possible.

Tels sont les principes fondamentaux de l'organisation scientifique, principes fort éloignés de certains procédés travestis en organisation scientifique du travail, alors qu'il s'agit purement et simplement de recettes de fortune pour accroître la production sans prendre la peine d'assumer l'oeuvre solide et fondamentale que représente l'organisation de l'entreprise. La véritable organisation scientifique reconnaît au contraire, dans cette oeuvre fondamentale, la seule base sûre d'un changement les procédés de travail ou le rendement de la production.

Ainsi, l'organisation scientifique a été définie par l'expérience. La rationalisation, par contre, comme nous devons tous nous en rendre compte après ces journées de commune discussion, est d'une part une phraséologie d'aspect théorique et idéaliste, un effort pour appliquer des procédés rationnels à la vie économique; et d'autre part l'indice de certains faits actuels, généralement caractérisés par des combinaisons d'industrie suscitées par de grandes difficultés dans la vie économique.

EXPOSÉ TERMINAL

M'abstenant pour quelques instants de tout examen des mauvais résultats de la rationalisation qui ont été révélés au cours de notre discussion ici-même, je voudrais ajouter à nos définitions celle que nous a fournie le directeur de l'institut international de l'organisation scientifique du travail, à Genève, lorsqu'il a défini une industrie scientifiquement organisée un groupe d'entreprises rendant à la société des services semblables et complémentaires avec un minimum de dépenses d'effort ou de matériel, - le mot "effort" devant impliquer toutes les considérations humaines ayant pour nous de l'intérêt.

Je désirerais ajouter encore à ce cadre général de définitions, la déclaration faite par le rapport de l'I. R. I. présenté au Congrès International de l'Organisation Scientifique du Travail à Paris, il y a quinze jours. Basant ce rapport sur les travaux et les conférences antérieures de l'I. R. I., nous avons fait remarquer que l'organisation scientifique du travail a été souvent conçue de façon trop étroite, qu'on l'a fréquemment considérée comme une méthode applicable aux outils ou à l'installation en général, tandis que la prochaine grande phase de son développement doit être d'élargir l'horizon des possibilités qui sont en elle, par une compréhension plus profonde de la signification des relations humaines entre toutes les personnes engagées dans la vie industrielle. Ce programme n'est pas simplement dictée par la préoccupation des êtres humaines, comme si ces derniers pouvaient être considérés comme quelque chose d'à part dans l'industrie; mais il est au contraire essentiel à la réalisation d'une organisation vraiment rationnel de l'industrie elle-même, résultat de la coordination bien comprise de tous les facteurs de la vie économique, techniques et psychiques, économiques ou sociaux. Cette conception intégrale de la coordination est le seul guide sûr à quoi se fier pour organiser l'industrie. Car une organisation, de même qu'un organisme, tire son bon fonctionnement et sa vitalité de cette coordination adéquate. Si un organisme ou une organisation fonctionne mal, c'est qu'il y a une lacune dans la coordination de ses éléments. Des relations humaines satisfaisantes, c'est à dire au point de vue de l'I. R. I. des relations fonctionnant dans une harmonie véritable, ne sauraient faire défaut dans la définition ni dans la pratique d'une organisation scientifique authentique; celle-ci, en effet, bien que sur une base de matériaux, d'outils et d'installations techniques, n'en doit pas moins être toujours réalisée par des êtres humaines. La "Bestgestaltung der Industrie", pour reprendre le titre allemand de l'I. R. I., ne signifie rien d'autre que cette coordination telle qu'elle doit résulter du meilleur fonctionnement possible des activités économiques en vue de fournir à la société les objets matériels dont elle a besoin.

Pourquoi tous les pays du monde sont-ils actuellement si intensément préoccupés de cette question d'une meilleure organisation du travail pourquoi réfléchit-on partout à la rationalisation et à l'organisation scientifique? C'est évidemment parce que la guerre nous a laissé un monde économique terriblement troublé. Bien plus, la guerre a éclaté avant que nous n'ayons trouvé le moyen d'organiser les industries du monde, car si ce moyen avait été trouvé avant la guerre celle-ci n'aurait probablement pas eu lieu. Cette désorganisation ce besoin d'une production accrue et d'une plus vaste distribution des produits de l'industrie,

tous ces maux si aigus, causes, dans bien des pays, de tant de graves souffrances, frappent le monde entier.

Me sera-t-il permis de dire ici un mot qui n'entre pas, à proprement parler, dans les limites de ce résumé? C'est une remarque concernant les Etats-Unis d'Amérique, et qui n'a pas été faite au cours de notre conférence. Ici comme ailleurs en Europe, j'ai senti que les Européens ne croient peut-être pas que les Etats-Unis soient capable de comprendre les maux du vieux monde parce que l'Amérique n'a pas souffert comme souffre l'Europe. Cela, évidemment, est exact en un certain sens, bien que vous deviez vous rendre compte que l'ombre de la guerre fut également bien lourde, pour plus d'un coeur, en ce pays d'outre océan. Comme on l'a dit au congrès de Cambridge, l'Amérique ne devrait pas être considérée comme un pays à part, mais plutôt comme le résultat final de l'évolution des peuples d'Europe vers un nouvel ordre économique, évolution qui a créé les Etats-Unis d'Amérique tels que nous les connaissons aujourd'hui. Notre séparation, pendant la guerre, fut comparable à celle endurée par une partie d'une famille absente au moment où une terrible catastrophe se produisait au foyer.

Bien plus, avec des relations économique aussi étroites que le sont celles d'aujourd'hui, il ne peut pas y avoir de réelle securité économique pour l'Amérique si l'Europe souffre dans son économie. Encore une fois, tout ne marche pas si bien, aux Etats-Unis, qu'on pourrait le croire d'après les récits de voyageurs venus nous rendre visite pour une brève période de temps, et qui voient seulement nos villes de l'Est et, dans celles-ci, peut-être exclusivement le cadre de luxueux hôtels. Je pense en ce moment à un congrès de mineurs de charbon, dans l'Illinois, auquel j'ai assisté au mois de mars de cette année. Les difficultés économiques de la vie de ces mineurs et de leurs familles ne correspondaient guère à la réputation d'opulence des ouvriers américains. Tous, pour ainsi dire, étaient venus d'Europe, ou bien étaient des enfants d'Européens. La majorité des plus âgés était composée d'Anglais, de Gallois, d'Irlandais et d'Ecossais, mais d'autres pays étaient aussi représentés. Les Britanniques se seraient fort senti chez eux dans cette assemblée; et le rapport sur le chômage dans les mines de Grande-Bretagne, présenté par un chef du mouvement ouvrier américain pouvant dire, par exemple, "mon frère est mineur en Angleterre", reflétait la similitude des problèmes des deux côtés de l'Atlantique. Ces hommes souffraient, depuis des années, du chômage, du travail réduit, de l'insuffisance criante des salaires, de conditions générales d'existence qui étaient loin d'être comme il convenait; et cela, dans une **industrie essentielle** des Etats-Unis.

Je me souviens aussi d'une grève récente dans un village d'un de nos états du Sud, le Tennessee, en un lieu dénommé Happy River et où s'était établie une compagnie européenne. Celle-ci avait entendu dire que la main-d'oeuvre, dans un état du Sud, était à bas prix. Les ouvriers occupés par l'entreprise étaient des descendants d'Anglais venus d'Europe il y a deux siècles et, dans l'isolement de la vie montagnarde, plus d'une de leurs vieilles coutumes du dix-huitième siècle s'était conservée. On les avait arrachés à la montagne pour les jeter dans la vie industrielle, leur faisant ainsi brusquement sauter deux siècles. On s'était tout d'abord efforcé de pousser la production et d'avoir celle-ci à bon marché. Une grève en avait été le résultat. Nul ne sait ce qui arrivera dans les

tissages du Sud, dans ces conditions d'industrialisation précipitée. Au Nord, comme au Sud, l'industrie textile souffre considérablement de la dépression, du chômage, du travail irrégulier et des bas salaires, comme dans d'autres pays du monde.

L'instabilité du travail caractérise la situation des ouvriers dans les grandes industries essentielles des Etats-Unis. La même instabilité s'étend également à nos industries plus récentes. Une étude nouvellement faite par le Bureau des Statistiques du travail aux Etats-Unis a établi que l'industrie automobile présente une instabilité d'occupation ouvrière supérieure à celle de toutes les autres branches industrielles examinées jusqu'à ce jour. Les Etats-Unis n'ont pas organisé, comme vous l'avez fait en Europe, la moindre assurance sociale, excepté l'indemnité ouvrière en cas d'accident. Pour le chômage, aucune mesure légale n'a été prise et, seules, quelques très rares compagnies ont formé des fonds de réserve pour les périodes particulièrement difficiles. Nous sommes une nation favorisée à beaucoup d'égards, mais nous ne sommes pas tout à fait sans connaître les problèmes de l'Europe. Nous sommes tous englobés, les uns comme les autres, par des problèmes économiques d'une portée mondiale touchant l'accroissement nécessaire de la production et la non moins grande nécessité de trouver des débouchés aux produits eux-mêmes. Il est exact que certains progrès ont été réalisés, en Amérique, dans la compréhension du fait que des salaires plus hauts augmentent les débouchés et que la diminution des heures de travail, en élévant le niveau général de la vie, accroît d'autant la demande des produits. Peut-être est-ce par hasard que nos avons touché à ce fait. Mais c'est en tout cas une expérience que nous pouvons apporter à l'Europe en toute confiance, dans l'espoir que le niveau général de la vie s'élèvera dans le monde entier, car cette élévation est la seule base vraiment sûre de notre propre vie économique.

Mais c'est assez parler de l'Amérique. Nous avons besoin de la pensée de l'Europe sur les problèmes de l'Amérique. Nous avons besoin de penser en commun aux problèmes mondiaux et à la situation de l'Amérique à leur égard. A l'I. R. I., nous pouvons discuter librement ces relations internationales, y étant profondément conscients de la vie industrielle et économique commune dans laquelle nous nous trouvons tous engagés.

Voyons maintenant ce qui, en Europe et dans le nouveau monde, s'est passé dans le mouvement connu sous le nom de rationalisation. Ce mouvement, naturellement a pris bien des formes, comme j'ai essayé de l'indiquer, mais l'une de ses formes caractéristiques semble résider dans les combinaisons d'industries sous un contrôle unifié. On a également fait remarquer, au cours de cette conférence, la croissante concentration du contrôle financier et certains changements qui paraissent se produire dans les formes et dans la conduite du capital au sein de notre organisation économique, si bien qu'aujourd'hui les prix ne répondent plus à la demande avec la même rapidité qu'auparavant. Il en résulte que, par des ententes, les capitalistes industriels peuvent contrôler les prix et soutenir des entreprises inefficaces, à frais élevés et à bas salaires, sans un contrôle correspondant des conditions du travail par les ouvriers ni modification des prix par le consommateur.

EXPOSÉ TERMINAL

Tout au moins les nouvelles conditions de la production en masse ont apporté, dans les relations du capital, des prix, des salaires et de la demande, des modifications encore trop insuffisamment étudiées pour être comprises. Ces conditions nouvelles ont souvent amené du chômage, la mécanisation ou l'accélération du travail, et l'ouvrier a été tout à fait impuissant, aussi bien individuellement que dans ses organisations syndicales, à maintenir ses positions dans la vie économique.

Mais nos discussions ici-même ont montré que la simple combinaison d'industries ne saurait être identifiée avec une organisation scientifique véritable. Souvent une telle combinaison n'est qu'une nouvelle forme de la force; c'est un effort de contrôle par l'autorité. Ce n'est ni l'organisation scientifique ni la rationalisation dans le vrai sens du mot. La force est toujours une méthode paresseuse et intelligente d'atteindre une fin elle-même trop restreinte. Cette fin est généralement de nature égoiste et la fin, comme les moyens, sont situés dans un plan de vie encore insuffisamment évolué pour être scientifique. La tendance des nations à faire leur chemin par la force a son contre-partie dans bien des relations vitales, et il est actuellement un type de combinaison d'industrie, avec concentration du contrôle financier, qui n'est rien d'autre que la force appliquée aux relations économiques.

Je ne voudrais pas être soupçonnée de croire que toutes les grandes combinaisons d'industries sont des manifestations de force. Loin de là. Ce que je veux dire, c'est que, si leur but est d'augmenter la puissance de contrôle exercée par un groupe dans son propre intérêt, sur les ressources économiques, sans tenir compte des intérêts des ouvriers et des consommateurs, ces sortes de combinaisons sont essentiellement des instruments de force. Si, au contraire, le but poursuivi est d'améliorer l'accomplissement d'une certaine tâche ou la prestation d'un service, il est fort possible que la meilleure méthode à observer réside dans une combinaison d'industries plus étroitement conçue, combinaison qui sera dès lors, dans son essence, non point un phénomène de force, mais de l'organisation proprement rationnelle.

Mais comment établir cette organisation rationnelle de l'industrie? Nous laisserons, ici, nos regards redescendre sur de petites choses, sur le travail à l'atelier, parce que c'est à l'atelier, à l'usine, comme on l'a dit à Cambridge, que sont faites les relations humaines et que la possibilité d'organiser l'industrie dans son ensemble dérive de cette unité première que constitue la fabrique. Je vous rappellerai brièvement la discussion sur "le travail et ses conditions". Nous avons été invités, tout d'abord, à considérer un exemple de l'investigation par la science sociale, d'un problème spécifique des conditions du travail, à savoir la détermination de la meilleure durée à donner à la journée de travail. Partant de cette idée que les modifications du rendement ouvrier correspondent à des modifications dans la fatigue des travailleurs, le Bureau anglais des Recherches sur la fatigue industrielle a étudié, en les mesurant par les variations du rendement, les conséquences effectives entraînées par la diminution des heures de travail. Quelques résultats de ces recherches expérimentales nous ont été présentés, spécialement au point de vue de la semaine de cinq jours.

L'assemblée de la discussion a clairement montré que cette mesure quantitative des conséquences produites sur le rendement par la dimi-

nution des heures de travail ne saurait apporter qu'une réponse fragmentaire à la question de savoir quelle peut être la période de travail la plus désirable. Si le rendement est maintenu à un même niveau avec une journée de travail raccourcie, grâce à une accélération du travail lui-même, nous devons, par ailleurs, nous demander quelle est l'intensité de travail culturellement admissible. Ne convient-il pas de régler la période et la vitesse du travail de manière à laisser à la fois, dans chaque cycle de vingt-quatre heures, assez de temps au travailleur pour réparer sa fatigue et, d'autre part, assez de fatigue disponible à dépenser encore dans la récréation, en dehors de son travail?

Il a été naturellement indiqué que la diminution de la journée affecte différemment le rendement, selon la nature du travail. Si le travail à accomplir est avant tout d'ordre manuel, l'ouvrier contrôle sa vitesse, et son rendement sera favorablement influencé par des heures de travail raisonnablement réduites. Si le travail est l'oeuvre de la machine, un rendement plus grand pourra être obtenu par des progrès techniques d'installation et par l'emploi de meilleures machines capables de produire un certain rendement donné dans un temps donné également. Cette suggestion fut exprimée par un ouvrier. Un rendement accrû ne devrait pas être cherché dans un plus grand effort imposé à l'ouvrier, mais par l'étude des moyens grâce auxquels un effort moindre peut aboutir à un rendement plus satisfaisant. En résumé, la mécanisation a conduit l'industrie à un point où l'accroissement du rendement dépend de l'installation technique et des méthodes de direction; de telle sorte que la question d'une réduction des heures de travail n'est pas influencée par cet argument que la vitesse de l'ouvrier augmente s'il est libéré d'une fatigue excessive, mais repose plutôt sur le fait que les améliorations mécaniques rendent possible une augmentation désirable, au point de vue social, des heures de loisir.

Si l'on essaie de déterminer ce qui est désirable au point de vue social, on en vient à examiner en même temps le besoin, chez l'ouvrier, d'avoir des heures de liberté, et, à considérer les effets des longues journées de travail sur la vie de famille et sur la vie de la communauté. Ce n'est là qu'une des nombreuses conditions du travail pour lesquelles une base positive de décision, si valable qu'elle soit, réclame d'être complétée par les données provenant de l'expérience des ouvriers eux-mêmes. Ces données d'expérience ne peuvent être pleinement prises en considération dans l'organisation d'une industrie qu'à la condition d'instituer une participation quelconque des ouvriers à la détermination des conditions du travail.

Et c'est ainsi que nous avons été amenées à envisager le problème de la participation ouvrière à la direction des entreprises. Nous avons vu qu'il existe, dans tous les pays, des formes diverses d'organisation déjà constituées en vue d'assurer la représentation du travail, mais qu'actuellement la volonté d'utiliser ces organisations est faible. Dans beaucoup d'industries, nous ne sommes pas encore sortis de la période pendant laquelle, ainsi que l'a exprimé ici un représentant du monde du travail, les ouvriers ne font encore que réagir aveuglement contre des conditions intolérables. Nous sommes encore loin d'avoir atteint une situation où un rôle fonctionnel dans l'industrie serait reconnu aux organisations ouvrières, où celles-ci pourraient prendre leur part de la détermination des méthodes théoriques et de leur application concrète.

Pourtant, bien que cette constatation soit encore vraie en général, nous n'en avons pas moins, heureusement, des exemples de responsabilité fonctionnelle du travail. L'expérience réalisée par certaines usines semble montrer qu'il n'y a pas de contradiction essentielle entre l'organisation scientifique et le "self-government" dans l'industrie. Comme le directeur de l'Institut International de l'Organisation Scientifique du Travail l'a dit au cours de ces débats, le gouvernement des ouvriers par eux-mêmes serait plutôt, au contraire, un moyen de leur donner confiance dans une attitude scientifique de l'esprit. C'est donc un moyen de donner confiance aux ouvriers dans la direction de l'entreprise, confiance sans laquelle l'organisation ne saurait réaliser le maximum de la production.

Après avoir envisagé la possibilité de la participation ouvrière à la direction industrielle, nous avons discuté la question de la politique et des méthodes à suivre, en ce qui concerne le personnel, dans une entreprise scientifiquement organisée. Il nous est impossible de nous étendre longuement sur ce sujet et nous nous contenterons de rappeler ce fait fondamental, indiqué lors de l'examen de ce problème, que l'organisation fonctionnelle de l'industrie, rendant possible de fonder les décisions à prendre sur les faits et non plus sur la simple opinion, ou sur des conjectures, confère une signification tout à fait différente aux termes de "direction" et de "contrôle". Diriger, c'est comme on l'a dit, concevoir et prévoir. N'avons-nous pas souvent pensé que diriger c'était ordonner, commander? Dans une usine ayant vraiment développé son organisation selon les principes de la science, il n'y a, pour reprendre les termes employés par Taylor, "qu'un seul maître, et ce maître c'est le savoir". Si c'est le savoir qui est le maître, le mot "contrôle" prend un tout autre sens. Il ne veut plus dire la force de l'autorité, mais signifie une direction précise par le savoir, fondé lui-même sur l'étude de l'experience.

Dans de telles conditions, où toute l'administration d'une industrie est fondée sur le savoir et utilise, en retour, ce savoir pour guider la pratique quotidienne, toute la conception de la direction d'entreprise change. et les relations humaines peuvent alors trouver une base de coopération, au lieu de consister avant tout en un effort, de la part de ceux qui détiennent l'autorité, pour contrôler l'activité des travailleurs soumis à leur surveillance. Cette nouvelle conception n'a pas été appliquée, jusqu'ici, à l'ensemble d'une industrie. On en a cependant donné des exemples dans certains établissements particuliers, mais nous n'avons pas encore trouvé le moyen de prendre toute l'industrie du charbon ou toute l'industrie textile et de leur donner une organisation rationnelle.

Les même principes qui s'appliquent à un établissement particulier sembleraient pouvoir s'appliquer également à une industrie entière. Mais cette dernière application faisant défaut nous ne pouvons dériver de l'expérience les résultats de l'organisation rationnelle de toute une industrie. Nous pouvons seulement parler, non d'industrie organisée, mais d'industrie en voie d'organisation rationnelle. Mais nous pouvons commencer à entrevoir les lignes générales du rêve esquissé devant nous, à la fin de son discours, par le directeur du Bureau International de l'Organisation Scientifique du Travail. La volonté de former de larges

combinaisons d'industries implique une production ou des services plus efficaces, des prix moins élevés pour le consommateur, des salaires plus élevés pour l'ouvrier et un rendement plus sûr, autrement dit plus satisfaisant, des capitaux investis; car les problèmes d'arrangements financiers, en relation avec l'organisation et le contrôle de la production et de la distribution, viendraient eux-mêmes se ranger dans le plan des méthodes scientifiques tendant à servir la communauté.

Cela est peut-être un rêve et peut-être ne sommes-nous, actuellement, qu'à demi éveillés. Mais il y a assez d'expérience dans l'industrie pour nous faire croire que ce rêve reflète les tendances dont nous sommes appelés à prendre une conscience croissante. Nous ne pouvons pas voir très loin dans l'avenir, mais assez loin pour savoir, qu'il nous est permis de commencer dès maintenant dans les usines, à adopter des méthodes inédites fondées sur l'attitude nouvelle d'une organisation vraiment scientifique. C'est de l'application de ces méthodes que nous devrons dégager notre expérience pour un plus large contrôle.

Nous n'avons formulé, à la suite de nos discussions, aucun programme. Nos débats, toutefois, ont montré l'importance de développer dans nos usines et dans nos industries des plans d'action et des méthodes pratiques d'organisation propres à favoriser les forces créatrices de ceux qui travaillent, quelle que puisse être leur fonction. Nous devons, dans les groupes composant l'industrie, loin de favoriser l'accroissement de leurs exigences antagonistes, aider au contraire à réaliser d'un fonctionnement harmonieux dans un but représentant l'intérêt général. Permettez-moi de vous rappeler qu'il a été dit, au congrès de Cambridge, que le but de l'organisation des groupes est de préserver l'intégrité de l'individu. Le groupe n'oublie pas l'individu; il ne fait que lui donner, par sa propre puissance plus haute, un pouvoir accrû d'agir avec d'autres groupes en vue d'un but commun.

La force doit être abandonnée, en même temps que tous les objectifs inadéquats de notre vie économique, si nous tenons à développer une organisation industrielle satisfaisante et capable de subvenir aux besoins du monde actuel. L'organisation industrielle dont le monde a besoin est une organisation servant rationnellement la société et ses membres. Aucune autre ne mérite de se voir consacrer la vie des hommes et des femmes qui, de leur cerveau ou de leurs mains, travaillent dans l'industrie.

ADDENDUM

LIST OF PARTICIPANTS

LISTE DES MEMBRES DE LA RÉUNION

TEILNEHMERLISTE

Australia:

Dr. O. Wunderlich
Managing Director Wunderlich Ltd.
Sydney.

Mrs. O. Wunderlich**
Sydney.

Belgique:

Monsieur H. Pauwels
Secrétaire Général de la Confédération des Syndicats Chrétiens
13, Avenue de la Renaissance, Bruxelles.

Danmark:

Frau Dr. R. Schou
Fabrikinspektorin
Solbrää, Holte bei Kopenhagen.

Deutschland:

Frau Dr. A. Böhme
Referentin im Deutschen Roten Kreuz
Sächsischestrasse 74, Berlin W. 15.

Herr Arved Dach, cand. cam. ing.
Leiter der Quäker Austauschstelle für Schrifttum sozial-menschlicher Betriebsarbeit
Nollendorfstr. 29-30, Berlin W. 30.

Frau Dr. M. Draeger
Hardenbergstrasse 2, Berlin-Charlottenburg.

Herr Ing. G. Engel
Geschäftsführung, Verein Deutscher Werkzeugmaschinenfabriken
Schlüterstrasse 31, Berlin-Charlottenburg.

Frl. Ilse Ganzert
Soziale Betriebsarbeiterin im Ausschuss für Soziale Betriebsarbeit
Friedhofstrasse 34I, Bielefeld.

Frl. Lotte Jahn
Soziale Betriebsarbeiterin im Ausschuss für Soziale Betriebsarbeit
Friedhofstrasse 34I, Bielefeld.

Herr Dr. Jost
Institut für Betriebssoziologie und soziale Betriebslehre an der Technischen Hochschule Berlin
Franklinstrasse 6, Berlin.

Frl. M. Kleine
Gewerbefürsorgerin am Gewerbeaufsichtsamt
Am Wall 112, Bremen.

Deutschland: (ctd.)

Herr F. Levin
Geschäftsführer der Firma Herman Levin G.m.b.H.
Königsallee 81, Göttingen.

Herr Erich Lübbe
Vize-Präsident der I.R.I.,
Werkzeugdreher und Vorsitzender des Gesamtbetriebsrates der Siemens-Schuckert A.-G.
Berlin-Siemensstadt.

Herr Dr. F. Meyer zu Schwabedissen
Schatzmeister der I.R.I.,
Mitinhaber der Fa. Bertelsmann & Niemann
Ulmenstrasse 13, Bielefeld.

Herr Georg Mattern
Elektriker und erster Vorsitzender des Betriebsrates in der Schering Kahlbaum A.-G.
Müllerstrasse 170-71, Berlin.

Frau Ilse Müller-Kattentidt
Geschäftsführerin der Gesellschaft für angewandte Charakterkunde
Flensburgerstrasse 20, Berlin 87.

Herr Ing. H. Oppenheimer
Beratender Ingenieur
Regentenstr. 2, Berlin W. 10.

Frl. R. Paul
Fabrikpflegerin in der Firma Schulenberg und Bessler
Talstrasse 1, Gera Thür.

Frl. Milly Reinhardt
Grüneburgweg 87a, Frankfurt a.M.

Herr Dr. Rudolph Schwenger
Assistent am Institut für Betriebssoziologie und soziale Betriebslehre an der Technischen Hochschule Berlin, Mitarbeiter an "Soziale Praxis"
Konstanzerstrasse 30, Berlin-Wilmersdorf.

Herr A. L. Sellier
Verleger und Buchdruckereibesitzer
Ottostrasse 1a, München.

Herr G. C. Stoltz
Quäker Austauschstelle für Schrifttum sozialmenschlicher Betriebsarbeit
Burgstrasse 3, Auerbach-Hessen.

Frau Dr. F. Wunderlich
Verfasserin des Werkes "Produktivität"
Schriftleiterin der Zeitschrift "Soziale Praxis",
Bureau für Sozialpolitik
Nollendorfstrasse 29-30, Berlin W. 30.

Espana:

Monsieur C. de Madariaga*
Directeur Général du Travail, du Commerce et de l'Industrie
Calle Jaen 7, Madrid.

M. José Mallart
Professeur à l'Institut de Rééducation Professionnelle
Carabanchel Bajo, Madrid.

Mme. G. Palacios de Mallart
Rédactrice de la "Revista de Politica Social"
Arbol del Paraiso, Chamartin de la Rosa, Madrid.

France:

Mlle. E. Catelet
Surintendante à l'Usine Geo.
83, Avenue de Fontainebleau, Kremlin-Bicêtre (Seine).

Monsieur H. Dubreuil
Secrétaire de la Confédération Générale du Travail
Rue Lafayette 211, Paris 10.

Mme. H. Dubreuil**
Paris.

Mlle. E. Roux
Surintendante, Société Lorraine Diétrich,
Argenteuil S. et O.

Gt. Britain:

Miss Arundel**
York.

Miss Caley
Messrs. Bryant & May Ltd.
Liverpool

Mr. D. W. Collier
Maintenance Engineer, Messrs. Cadbury Bros. Ltd.
Bournville, Birmingham.

Mr. C. S. Crossley
Production Manager, Messrs. Rowntree & Co. Ltd.
York.

Mr. W. George
Worker's representative of the Men's Chocolate Mfg. Dept. upon the Men's Council, Messrs. Cadbury Bros. Ltd.
Bournville, Birmingham.

Mr. G. B. Lloyd
Director and Personnel Worker, Messrs. Morland & Impey Ltd.
Birmingham.

Mr. R. J. Mackay
Secretary Group I, Management Research Groups,
23, Bloomsbury Square, London.

Gt. Britain: (ctd.)

Miss P. B. Muscott
Head of Women's Employment Dept., Messrs. Cadbury Bros. Ltd.
Bournville, Birmingham.

Dr. C. H. Northcott.
Labour Manager, Messrs. Rowntree & Co. Ltd.
York.

Mrs. C. H. Northcott**
York.

Miss F. E. Sewell
Workers' representative of the Girls' Offices upon the Women's Council Messrs. Cadbury Bros. Ltd.
Bournville, Birmingham.

Miss Thyra Smith
Assistant Psychologist, Messrs. Rowntree & Co. Ltd
York.

Miss D. F. Tait*
Ministry of Labour, Statistics Division
Westminster, London.

Dr. H. M. Vernon
Investigator for the Industrial Fatigue Research Board London
5, Park Town, Oxford

Mrs. H M. Vernon**
Oxford.

Miss E. Whalley M.A.
4, Beaufort Road, Edinburgh.

Holland:

Mr. C. H. van der Leeuw
President I.R.I.,
Partner Messrs. de Erven de Wed. J. van Nelle
Rotterdam.

Miss J. J. Mackay
Vondelstraat 14, Amsterdam.

International:

Miss M. L. Fleddérus
Vice-President I.R.I.,
Javastraat 66, The Hague, Holland.

Herr H. von Haan
Chief of Information Section, International Management Institute
Geneva, Switzerland.

Mrs. H. von Haan**
Geneva, Switzerland.

Mr. C. A. Johnston D. Phil.
Chief of Section, Intelligence and Liaison Division, International Labour Office,
Geneva, Switzerland.

International: (ctd.)

Major L. Urwick, O. B. E., M. C.
Director, International Management Institute
Geneva, Switzerland.

Miss E. Brenda Voysey B. A.
Secretary I. R. I.
Javastraat 66, The Hague, Holland.

Ireland:

Miss L. Bennett*
Secretary, Irish Women Workers' Union
Eden Quay 7-8, Dublin.

Mr. R. M. Fox
Journalist, 16, Seafort Parade, Williamstown
Co. Dublin.

Mrs. R. M. Fox**
Williamstown.

Italia:

Dr. A. Correggiari
Expert Conseil dans les Questions de Relations Industrielles, Fabbrica Italiana Magneti Marelli, Sesto San Giovanni
Milano.

Ing. C. A. Ferrari
Consulting Engineer, "Terni" Società per l'industria e l'elettricità
Terni.

Oesterreich:

Herr Alfred Härting
Generalsekretär des Bundes der Industrieangestellten Oesterreichs
Unt. Donaustr. 39, Wien.

Frau Härting**
Wien.

Frau J. Kotzbeck
Fabrikpflegerin in der "Humanic" Schuhfabrik
Lastenstrasse 11, Graz.

Herr Hans Mars
Referent, Arbeitswissenschaftliches Referat der Kammer für Arbeiter und Angestellte
Ebendorferstrasse 7, Wien I.

Frau E. Mayer-Heinisch
Schottenfeldgasse 27, Wien VII.

Herr Dr. F. A. Mayer*
Präsident der "Humanic" Schuhfabrik
Schottenfeldgasse 27, Wien VII.

Herr Erich Meinl**
Hohe Warte 23, Wien.

LIST OF PARTICIPANTS

Oesterreich: (ctd.)

Herr Komm. Rat Hugo Meinl
Direktor der Baumwoll- Spinn- und Weberei Meinl's Erben
Hohe Warte 23, Wien.

Herr Julius Meinl jun.*
Verwaltungsrat, Julius Meinl A.-G.
Nauseagasse 59-63, Wien I.

Herr Dr. E. Palla*
Generalsekretär der Kammer für Arbeiter und Angestellte
Ebendorferstrasse 7, Wien I.

Herr Dr. K. Schechner*
Geschäftsführender Verwaltungsrat und Generaldirektor der Julius Meinl A.-G.
Nauseagasse 59-63, Wien.

Polen:

Herr Dr. Ing. B. Biegeleisen
Privat-Dozent an der Technischen Hochschule, Leiter des Psychotechnischen Instituts
Smolenska 9, Krakau.

Frau Dr. Biegeleisen**
Krakau.

Romania:

Mme L. Roxane Calomeri
Inspectrice du Travail
Strada Valcov 35, Bucarest.

Schweiz:

Frl. E. Bachman
Fabrikpflegerin in der Maschinenfabrik Gebr. Bühler
Nieder-Uzwil.

Frau Dr. F. Baumgarten
Psychologin, Privat-Dozentin für Psychotechnik, Universität Bern.
Rosegg, Solothurn.

Frau Ada von Martini
4, Klusdörfli, Zürich.

Frau Dr. L. Rudolph
Doktor der Nationalökonomie
Mythenquai 26, Zürich.

Herr Dr. V. Schoch
Fabrikarzt in den Bally Schuhfabriken
Schönenwerd

Frl. M. L. Schumacher
Sekretärin des "Schweizer Verband Volksdienst"
Imfeldsteig 6, Zürich.

Frl. M. L. Wild*
Mattenheim, Lyss.

Schweiz: (ctd.)

Frau Dr. E. Züblin-Spiller
Direktion "Schweizer Verband Volksdienst"
Kilchberg bei Zürich.

Sweden:

Miss Tilly Neovius
Private Secretary to the President of Avesta
Steel Works, c/o Johnson Line
Stureplan 3, Stockholm.

U. S. A.:

Miss A. S. Cheyney Ph. D.*
Assistant Director of Washington Branch of
International Labour Office
Lenox Buildings. Washington.

Miss M. B. Gilson M. A.
Member Research Staff, Industrial Relations
Counselors Inc.
165, Broadway, New York

Mr. W. W. Kincaid
President, The Spirella Co.
Niagara Falls N.Y.

Miss Mary van Kleeck
Vice-President I.R.I.,
Director, Dept. of Industrial Studies. Russell
Sage Foundation
130 East 22nd Str., New York City.

* Prevented from attending meeting. Empêchés de participer. An der Teilnahme verhindert.

** Accompanying member, not participating in meetings. Accompagnent des membres, mais ne participent pas à la réunion. Kommen in Begleitung von Mitgliedern und nehmen nicht an der Versammlung teil.

INTERNATIONAL INDUSTRIAL RELATIONS ASSOCIATION

(for the Study and Promotion of Satisfactory Human Relations and Contions in Industry). The Hague, Holland, 66 Javastraat.
Branch Office c/o Vice-President in the U. S. A., Mary van Kleeck, Director
Department of Industrial Studies, Russell Sage Foundation,
130 East 22d St. New York.

DATE OF FOUNDATION: June 1925, Flushing, Holland.

TYPE OF INSTITUTION: Independent voluntary industrial association, open to all who are engaged in any undertaking involving the employment of persons, or who are occupied in work of scientific research or social significance bearing on Industry.

OBJECT: To focus attention on the need for working out a technique of satisfactory human relations, including right working conditions; and to provide a common meeting ground within industry itself for the free and individual exchange of ideas and working experience towards this end. At the same time the Association, by its composition and method of work, assists in relating science to practice and practice to science.

RELATION TO OTHER INSTITUTIONS: Independent collaboration with bodies and persons whose work lies within the Association's range of interest.
The attitude of the Association towards other international industrial bodies is one of supporting whatever is evolutionary in the work of these bodies.

MEMBERSHIP is individual and is open to:
Directors, Managers, Personnel Workers, Psychologists, Doctors, Engineers, Foremen and Forewomen;
Employees;
Officers of Employers', Workers' and other industrial organizations, Members of Industrial Boards and Councils, Factory Inspectors;
Industrial Research Workers, Industrial Educationalists, Industrial Social Workers and so forth.

CLASSES OF MEMBERSHIP:
Ordinary Members;
Supporting Members;
Subscribers - in which class Bodies and Firms are included.

DUES:

Ordinary members	- Minimum 10/- per annum, reduced to 5/- in certain countries.
Supporting members	- £1 per annum and upwards.
Subscribers	- £1 per annum and upwards.

ACTIVITIES AND METHODS OF WORK: The activities of the Association may be summarized under three main headings:

Providing possibilities for study and for the interchange of thought and working experience through the organization of meetings;

Maintaining and extending the established contact, particularly through the interchange of information and visits between members in the various countries;

Creating industrial and public opinion by means of publications from time to time.

A Congress of members normally takes place every three years. The Council meets annually to conduct the affairs of the Association and to study some special aspect of industrial relations. This meeting usually takes the form of a discussion meeting open to members of the Association.

PUBLICATIONS: See list of publications at end of this volume.

INTERNATIONALE VEREINIGUNG FÜR BESTGESTALTUNG DER ARBEIT IN BETRIEBEN Javastraat 66, Haag, (Holland).

Zweigstelle: z.Hd. der Vizepräsidentin in den Vereinigten Staaten, Miss Mary van Kleeck, Direktorin der Abteilung für industrielle Forschungen, Russell Sage Foundation, 130 East 22nd Street, New York.

GRUENDUNGSDATEN: Juni 1925, Vlissingen, Holland.

ART DER VEREINIGUNG: Freie, unabhängige, der Bestgestaltung der industriellen Arbeit dienende Vereinigung. Aufgenommen werden Persönlichkeiten, die in einem mehrere Personen beschäftigenden Betriebe tätig sind, oder die durch betriebswissenschaftliche oder soziale Arbeit in irgend einer Beziehung zur Industrie stehen.

ZWECK: Die allgemeine Aufmerksamkeit auf die Notwendigkeit der planmässigen Schaffung befriedigender menschlicher Beziehungen und damit auch auf gute Arbeitsbedingungen zu lenken. Im Verfolg dieses Zieles innerhalb der Industrie selbst einen allgemeinen Sammelpunkt für den freien und persönlichen Austausch von Gedanken und Arbeitserfahrungen zu bilden. Gleichzeitig will die Vereinigung durch ihre Zusammensetzung und ihre Arbeitsformen darauf hinwirken, die Theorie mit der Praxis und die Praxis mit der Theorie zu verbinden.

BEZIEHUNGEN ZU ANDEREN ORGANISATIONEN: Freie Zusammenarbeit mit Vereinigungen und Persönlichkeiten, deren Arbeitsgebiet im Interesse der I. R. I. liegt. Die Vereinigung unterstützt die auf die fortschrittliche innere Entwicklung gerichteten Bestrebungen zielverwandter internationaler Organisationen.

DIE MITGLIEDSCHAFT ist persönlich. Aufgenommen werden:
Direktoren, Betriebsleiter, Fabrikpfleger, Psychologen, Aerzte, Ingenieure, Werkmeister und Vorarbeiter;
Arbeiter und Angestellte;
Beamte von Arbeitgeber-, Arbeitnehmer- und anderen industriellen Organisationen, Mitglieder der für die Industrie zuständigen Ministerien und Körperschaften, Gewerbeinspektoren;
Betriebswissenschaftliche Forscher, Pädagogen, industrielle Sozialarbeiter, etc.

MITGLIEDERGRUPPEN:
Ordentliche Mitglieder;
Fördernde Mitglieder;
Förderer - zu welcher Gruppe auch Körperschaften und Firmen gehören.

MITGLIEDSBEITRAEGE:
Ordentliche Mitglieder - Mindestbeitrag £-.10/- pro Jahr; in einigen Ländern ermässigt auf £-.5/- pro Jahr.
Fördernde Mitglieder - £1 und mehr pro Jahr.
Förderer - £1 und mehr pro Jahr.

TAETIGKEIT UND ARBEITSFORMEN: Für die Tätigkeit der Vereinigung sind drei Richtlinien massgebend:

Schaffung von Gelegenheiten zum Studium und zum Austausch von Gedanken und Arbeitserfahrungen durch die Veranstaltung von Tagungen;

Aufrechterhaltung und Erweiterung der angeknüpften Beziehungen in erster Reihe durch Erfahrungsaustausch und wechselseitige Besuche der Mitglieder in den verschiedenen Ländern;

Verbreitung der Ideen der Vereinigung in industriellen Kreisen und in der Oeffentlichkeit.

Ein Mitgliederkongress findet in der Regel alle drei Jahre statt. Der Rat tagt jährlich um die Geschäfte der Vereinigung zu führen, und um ein Sonderproblem der Beziehungen in der Industrie zu erörtern. Diese Zusammenkünfte tragen im allgemeinen den Charakter von Aussprachen, an denen auch die Mitglieder der Vereinigung teilnehmen können.

VEROEFFENTLICHUNGEN: Siehe die Liste der Veröffentlichungen am Schlusse dieses Bandes.

ASSOCIATION INTERNATIONALE DES RELATIONS INDUSTRIELLES (pour l'étude et l'amélioration des rapports individuels et des conditions générales de travail dans l'industrie), La Haye, Hollande, Javastraat 66.

Bureau en Amérique: c/o Vice-présidente aux Etats-Unis, Mlle. Mary van Kleeck, Directrice de la Section des Etudes industrielles à la Russell Sage Foundation, 130 East 22nd Street, New York City.

DATE DE FONDATION: Juin 1925, Flessingue, Hollande.

NATURE: Association industrielle indépendante et volontaire, ouverte à tous ceux qui travaillent dans une entreprise impliquant l'emploi de personnes, ou qui s'occupent de recherches scientifiques d'une portée sociale se rapportant à l'industrie.

OBJET: Concentrer l'attention sur la nécessité d'élaborer une technique des relations humaines satisfaisantes, y compris des conditions de travail convenables, et créer un terrain de commune rencontre, au sein de l'industrie elle-même, pour un échange libre et personnel des idées conçues et des expériences acquises, en vue de réaliser cette fin. En même temps, l'Association, de par sa composition et sa méthode de travail, sert à relir la science à la pratique et, réciproquement, la pratique à la science.

RAPPORTS AVEC D'AUTRES INSTITUTIONS: Collaboration indépendante avec les corps constitués ou les personnes dont l'oeuvre fait partie du champ d'intérêt de l'Association.
A l'égard d'autres organismes internationaux, l'attitude de l'Association consiste à favoriser tout ce que l'oeuvre de ces institutions peut présenter de conforme à l'évolution et au progrès de la vie économique.

MEMBRES: La qualité de membre est individuelle et accessible aux:
Directeurs, Surintendantes, Psychologues, Médecins, Ingénieurs, Contremaitres;
Ouvriers et Employés;
Représentants des organisations patronales et ouvrières ou de toute organisation industrielle, Membres des Commissions officielles du travail, Inspecteurs du Travail;
Investigateurs et Professeurs de l'Industrie, Travailleurs sociaux, et ainsi de suite.

CATEGORIES DE MEMBRES:
Membres ordinaires;
Membres donateurs;
Souscripteurs - catégorie où sont également admises des personnes morales et des firmes.

COTISATIONS:
Membres ordinaires - Minimum £-.10/- par an, réduit à £-.5/- pour certains pays,
Membres donateurs - £1 par an et au-dessus,
Souscripteurs - £1 par an et au-dessus.

ACTIVITES ET METHODES DE TRAVAIL: L'activité de l'Association peut être résumée comme suit:

Rendre possible l'étude et l'échange de pensées et d'expériences par l'organisation de rencontres communes,

Maintenir et étendre le contact établi entre les différents membres, spécialement par l'échange d'informations et au moyen de visites entre membres de pays différents,

Créer une opinion industrielle et publique, au moyen de publications intermittentes.

Un congrès réunissant les membres de l'Association a lieu, normalement, tous les trois ans. Le Conseil se réunit chaque année pour régler les questions administratives et étudier un aspect particulier des relations industrielles. Cette rencontre prend ordinairement la forme d'une assemblée de discussion ouverte à tous les membres.

PUBLICATIONS: Voir la liste des publications reproduite à la fin du présent volume.

LIST OF OTHER I.R.I. PUBLICATIONS (OBTAINABLE FROM THE SECRETARIAT 66, JAVASTRAAT, THE HAGUE, HOLLAND AND FROM ROOM 600, RUSSELL SAGE FOUNDATION, 130 EAST 22nd STREET, NEW YORK.)

	Price per Copy (post free)	
	Members	Non-Members
Fundamental Relationships between all Sections of the Industrial Community - 1928 Cambridge Congress Report.		
Vol. I. Reports from 18 countries on Industrial Relations as affected by Co-operation between Groups; Education and Training; Personnel and Employment Administration; Scientific Management; Industrial Psychology; and Vocational Guidance, 300 pages [1] ...	Fl. 2.— £ -.3/6 $ 1.—	2.50 -.4/- 1.25
Vol. II. Addresses on Groups in Industry, Contribution of the Social Sciences to Industrial Relations, Public Opinion and Industrial Relations, and round table discussions on Training Foremen and Supervisors, The Place of Personnel Work, Problems of Research, etc. 417 pages [2]	Fl. 2.50 £ -.4/- $ 1.25	3.50 -.6/- 1.75
The Development of Fundamental Relationships within Industry in the U.S.A., 116 pages (Reprinted from Cambridge Congress Report, Vol. I.) by H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne and G. A. Bowers [3]	Fl. 0.60 £ -.1/- $ 0.50	0.60 -.1/- 0.50
Concluding Summary of Cambridge Congress by Mary van Kleeck, Director Industrial Studies, Russell Sage Foundation, New York, 17 pages (Reprinted from Cambridge Congress Report Vol. II) [4]	Fl. 0.10 £ -.-/3 $ 0.05	0.25 -.-/5 0.10
The Elimination of Unnecessary Fatigue in Industry, 129 pages (Report of Summer School held at Baveno, Italy, June 1927) [1]	Fl. 1.50 £ -.2/6 $ 1.—	1.50 -.2/6 1.—
Report of 1925 Flushing (Holland) Congress (at which the Association was formed) 491 pages [3]	Fl. 2.50 £ -.4/- $ 1.50	3.60 -.6/- 1.50

[1] Edited in the original language (English, French or German) in which each contribution was made.
[2] Translations into the remaining two languages added in a few outstanding instances.
[3] English text only.
[4] English, French or German texts.

LISTE WEITERER I. R. I. VERÖFFENTLICHUNGEN (ZU BEZIEHEN VOM SEKRETARIAT DER I. R. I., JAVASTRAAT 66, DEN HAAG HOLLAND.)

	Preis p. Exemplar, portofrei	
	Mitglieder	Nicht-Mitglieder
Grundlegende Beziehungen zwischen allen an der Industrie beteiligten Gruppen - Bericht über den Kongress von Cambridge, 1928.		
Band I enthält Berichte aus 18 Ländern über industrielle Beziehungen unter Berücksichtigung von: Zusammenarbeit zwischen den Gruppen in der Industrie; Ausbildung und Schulung; Personal- und Einstellungsfragen; Wissenschaftliche Betriebsführung; Arbeitspsychologie; Berufsberatung, 300 Seiten[1]	Fl. 2.—	2.50
Band II enthält Vorträge über "Die industriellen Gruppen", "Der Beitrag der Sozialwissenschaften zu den industriellen Beziehungen", "Die öffentliche Meinung und die industriellen Beziehungen", und Aussprachen in kleinen Gruppen über "Die erzieherische Ausbildung von Werkmeistern und Aufsehern", "Der Platz des Personaldienstes", "Probleme, die eine Untersuchung erfordern", etc., 417 Seiten[2]	Fl. 2.50	3.50
Die Entwicklung der grundlegenden Beziehungen in der Industrie in den Vereinigten Staaten, 116 Seiten (Sonderabzug aus dem ersten Band des Cambridge Kongressberichtes) von H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne und Glenn A. Bowers[3]	Fl. 0.60	0.60
Zusammenfassender Schlussbericht des Kongresses in Cambridge, von Mary van Kleeck, Director, Industrial Studies, Russell Sage Foundation, New York, 17 Seiten (Sonderabzug aus dem zweiten Band des Berichtes über den Kongress in Cambridge)[4]	Fl. 0.10	0.25
Die Vermeidung unnützer Ermüdung in Industriebetrieben, 129 Seiten (Bericht der Sommerschule, die im Juni 1927 in Baveno, Italien, abgehalten wurde)[1]	Fl. 1.50	1.50
Bericht über den Kongress in Vlissingen (Holland) im Jahre 1925 (an welchem die Vereinigung gegründet wurde) 491 Seiten[2]	Fl. 2.50	3.60

[1] Setzt sich aus Beiträgen in der Originalsprache zusammen (deutsch, englisch oder französisch).
[2] In einigen besonderen Fällen bestehen nebst den Originalbeiträgen noch Uebersetzungen in die beiden anderen Sprachen.
[3] Nur in englischer Sprache.
[4] In deutscher, französischer und englischer Sprache.

AUTRES PUBLICATIONS DE L'I. R. I. (EN VENTE AU SECRÉTARIAT, JAVASTRAAT 66, LA HAYE, HOLLANDE.)

	Prix p. exemplaire port payé	
	Membres	Autres personnes
La nature des relations fondamentales entre les diverses sections de la communauté industrielle - Rapport du Congrès de Cambridge en 1928. Le 1er volume contient des rapports de 18 pays sur les relations industrielles en tant qu'elles sont influencées par la collaboration entre les différents groupes; l'Education et la formation professionnelle; l'Organisation du service du personnel; l'Organisation scientifique du travail; la Psychologie industrielle; l'Orientation professionnelle, 300 pages [1]	Fl. 2.—	2.50
Le IIème volume contient des adresses présentées sur les sujets suivants: Les Groupes dans l'Industrie; La contribution des sciences sociales aux relations industrielles; L'opinion publique et les relations industrielles; et des discussions en petits groupes sur la nature de la formation pédagogique des contre-maîtres et des surveillants; le rôle du service du personnel dans l'organisation; les problèmes de recherche, etc., 417 pages [2]	Fl. 2.50	3.50
Le développement des relations fondamentales dans l'industrie dans les E. U. A., 116 pages (réimprimé du rapport sur le Congrès de Cambridge, Ier vol.) par H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne et G. A. Bowers [3]	Fl. 0.60	0.60
Sommaire et Conclusions du Congrès de Cambridge, par Mary van Kleeck, Director, Industrial Studies, Russell Sage Foundation, New York, 17 pages, (réimprimé du rapport sur le Congrès de Cambridge, vol. II) [4]	Fl. 0.10	0.25
L'Elimination de la fatigue inutile dans l'industrie (Rapport du Cours d'été tenu à Baveno, Italie, en Juin 1927) 129 pages [1]	Fl. 1.50	1.50
Rapport du Congrès de Flessingue (Hollande) en 1925 (auquel l'association fut fondée) 491 pages [2]	Fl. 2.50	3.60

[1] Se compose de contributions dans la langue originelle (français, allemand ou anglais.)
[2] Contient des contributions dans la langue originelle et en quelques cas spéciaux une traduction dans les deux autres langues.
[3] Seulement en anglais.
[4] En français, anglais et allemand.

OFFICERS AND MEMBERS OF EXECUTIVE COMMITTEE

VORSTAND UND GESCHÄFTSFÜHRENDER AUSSCHUSS

MEMBRES DU BUREAU ET DU COMITÉ EXÉCUTIF

President:

Mr. C. H. van der Leeuw
Partner Messrs. de Erven de Wed. J. van Nelle, Rotterdam, Holland.

Vice-Presidents:

Miss M. L. Fleddérus
Consultant on Industrial Relations,
66, Javastraat, The Hague, Holland.

Miss Mary van Kleeck
Director Industrial Studies, Russell Sage Foundation, 130 East 22nd Street,
New York, U. S. A.

Herr Erich Lübbe
Werkzeugdreher, Vorsitzender des Gesamtbetriebsrates, Siemens-Schuckert A.-G.
Berlin-Siemensstadt.

Treasurer:

Herr Dr. F. Meyer zu Schwabedissen
Mitinhaber der Fa. Bertelsmann & Niemann
Ulmenstrasse 13, Bielefeld, Deutschland.

Members of Executive Committee:

Dr. A. Correggiari
Consultant on Industrial Relations
Fabbrica Italiana Magneti Marelli
Sesto San Giovanni, Milano, Italia.

Herr H. von Haan
Chief of Information Section,
International Management Institute,
Geneva, Switzerland.

Dr. G. H. Miles
Assistant Director National Institute of Industrial Psychology, Aldwych House,
London W.C. 2, England.

Mr. Spencer Miller Jr.
Secretary Workers' Education Bureau of America,
476 West 24th Street, New York, U. S. A.

Miss L. C. Odencrantz
Director Employment Centre for the Handicapped,
407 Second Avenue, New York, U. S. A.

Frau Dr. Frieda Wunderlich
Bureau für Sozialpolitik, Nollendorfstrasse 29/30,
Berlin W. 30, Deutschland.

Secretary:

Miss E. Brenda Voysey B.A.
66, Javastraat, The Hague, Holland.

OFFICERS AND MEMBERS OF EXECUTIVE COMMITTEE

VORSTAND UND GESCHÄFTSFÜHRENDER AUSSCHUSS

MEMBRES DU BUREAU ET DU COMITÉ EXÉCUTIF

President:

Mr. C. H. van der Leeuw
Partner Messrs. de Erven de Wed. J. van Nelle, Rotterdam, Holland.

Vice-Presidents:

Miss M. L. Fleddérus
Consultant on Industrial Relations,
66, Javastraat, The Hague, Holland.

Miss Mary van Kleeck
Director Industrial Studies, Russell Sage Foundation, 130 East 22nd Street, New York, U. S. A.

Herr Erich Lübbe
Werkzeugdreher, Vorsitzender des Gesamtbetriebsrates, Siemens-Schuckert A.-G.
Berlin-Siemensstadt.

Treasurer:

Herr Dr. F. Meyer zu Schwabedissen
Mitinhaber der Fa. Bertelsmann & Niemann
Ulmenstrasse 13, Bielefeld, Deutschland.

Members of Executive Committee:

Dr. A. Correggiari
Consultant on Industrial Relations
Fabbrica Italiana Magneti Marelli
Sesto San Giovanni, Milano, Italia.

Herr H. von Haan
Chief of Information Section,
International Management Institute,
Geneva, Switzerland.

Dr. G. H. Miles
Assistant Director National Institute of Industrial Psychology, Aldwych House,
London W.C. 2, England.

Mr. Spencer Miller Jr.
Secretary Workers' Education Bureau of America,
476 West 24th Street, New York, U. S. A.

Miss L. C. Odencrantz
Director Employment Centre for the Handicapped,
407 Second Avenue, New York, U. S. A.

Frau Dr. Frieda Wunderlich
Bureau für Sozialpolitik, Nollendorfstrasse 29/30,
Berlin W. 30, Deutschland.

Secretary:

Miss E. Brenda Voysey B.A.
66, Javastraat, The Hague, Holland.

CHECKED
2003-04

LIST OF OTHER I.R.I. PUBLICATIONS (OBTAINABLE FROM THE SECRETARIAT 66, JAVASTRAAT, THE HAGUE, HOLLAND AND FROM ROOM 600, RUSSELL SAGE FOUNDATION, 130 EAST 22nd STREET, NEW YORK.)

	Price per Copy (post free)	
	Members	Non-Members
Fundamental Relationships between all Sections of the Industrial Community - 1928 Cambridge Congress Report.		
Vol. I. Reports from 18 countries on Industrial Relations as affected by Co-operation between Groups; Education and Training; Personnel and Employment Administration; Scientific Management; Industrial Psychology; and Vocational Guidance, 300 pages[1] ...	Fl. 2.— £ -.3/6 $ 1.—	2.50 -.4/- 1.25
Vol. II. Addresses on Groups in Industry, Contribution of the Social Sciences to Industrial Relations, Public Opinion and Industrial Relations, and round table discussions on Training Foremen and Supervisors, The Place of Personnel Work, Problems of Research, etc. 417 pages[2]	Fl. 2.50 £ -.4/- $ 1.25	3.50 -.6/- 1.75
The Development of Fundamental Relationships within Industry in the U.S.A., 116 pages (Reprinted from Cambridge Congress Report, Vol. I.) by H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne and G. A. Bowers[3]	Fl. 0.60 £ -.1/- $ 0.50	0.60 -.1/- 0.50
Concluding Summary of Cambridge Congress by Mary van Kleeck, Director Industrial Studies, Russell Sage Foundation, New York, 17 pages (Reprinted from Cambridge Congress Report Vol. II)[4]	Fl. 0.10 £ -.-/3 $ 0.05	0.25 -.-/5 0.10
The Elimination of Unnecessary Fatigue in Industry, 129 pages (Report of Summer School held at Baveno, Italy, June 1927)[1]	Fl. 1.50 £ -.2/6 $ 1.—	1.50 -.2/6 1.—
Report of 1925 Flushing (Holland) Congress (at which the Association was formed) 491 pages[2]	Fl. 2.50 £ -.4/- $ 1.50	3.60 -.6/- 1.50

[1] Edited in the original language (English, French or German) in which each contribution was made.
[2] Translations into the remaining two languages added in a few outstanding instances.
[3] English text only.
[4] English, French or German texts.

LISTE WEITERER I. R. I. VERÖFFENTLICHUNGEN (ZU BEZIEHEN VOM SEKRETARIAT DER I. R. I., JAVASTRAAT 66, DEN HAAG HOLLAND.)

	Preis p. Exemplar, portofrei	
	Mitglieder	Nicht-Mitglieder
Grundlegende Beziehungen zwischen allen an der Industrie beteiligten Gruppen - Bericht über den Kongress von Cambridge, 1928.		
Band I enthält Berichte aus 18 Ländern über industrielle Beziehungen unter Berücksichtigung von: Zusammenarbeit zwischen den Gruppen in der Industrie; Ausbildung und Schulung; Personal- und Einstellungsfragen; Wissenschaftliche Betriebsführung; Arbeitspsychologie; Berufsberatung, 300 Seiten [1]	Fl. 2.—	2.50
Band II enthält Vorträge über "Die industriellen Gruppen", "Der Beitrag der Sozialwissenschaften zu den industriellen Beziehungen", "Die öffentliche Meinung und die industriellen Beziehungen", und Aussprachen in kleinen Gruppen über "Die erzieherische Ausbildung von Werkmeistern und Aufsehern", "Der Platz des Personaldienstes", "Probleme, die eine Untersuchung erfordern", etc., 417 Seiten [2]	Fl. 2.50	3.50
Die Entwicklung der grundlegenden Beziehungen in der Industrie in den Vereinigten Staaten, 116 Seiten (Sonderabzug aus dem ersten Band des Cambridge Kongressberichtes) von H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne und Glenn A. Bowers [3]	Fl. 0.60	0.60
Zusammenfassender Schlussbericht des Kongresses in Cambridge, von Mary van Kleeck, Director, Industrial Studies, Russell Sage Foundation, New York, 17 Seiten (Sonderabzug aus dem zweiten Band des Berichtes über den Kongress in Cambridge) [4]	Fl. 0.10	0.25
Die Vermeidung unnützer Ermüdung in Industriebetrieben, 129 Seiten (Bericht der Sommerschule, die im Juni 1927 in Baveno, Italien, abgehalten wurde) [1]	Fl. 1.50	1.50
Bericht über den Kongress in Vlissingen (Holland) im Jahre 1925 (an welchem die Vereinigung gegründet wurde) 491 Seiten [2]	Fl. 2.50	3.60

Setzt sich aus Beiträgen in der Originalsprache zusammen (deutsch, englisch oder französisch).
In einigen besonderen Fällen bestehen nebst den Originalbeiträgen noch Uebersetzungen in die beiden anderen Sprachen.
Nur in englischer Sprache.
In deutscher, französischer und englischer Sprache.

AUTRES PUBLICATIONS DE L'I.R.I. (EN VENTE AU SECRÉTARIAT, JAVASTRAAT 66, LA HAYE, HOLLANDE.)

	Prix p. exemplaire port payé	
	Membres	Autres personnes
La nature des relations fondamentales entre les diverses sections de la communauté industrielle - Rapport du Congrès de Cambridge en 1928. Le 1er volume contient des rapports de 18 pays sur les relations industrielles en tant qu'elles sont influencées par la collaboration entre les différents groupes; l'Education et la formation professionnelle; l'Organisation du service du personnel; l'Organisation scientifique du travail; la Psychologie industrielle; l'Orientation professionnelle, 300 pages [1]	Fl. 2.—	2.50
Le IIème volume contient des adresses présentées sur les sujets suivants: Les Groupes dans l'Industrie; La contribution des sciences sociales aux relations industrielles; L'opinion publique et les relations industrielles; et des discussions en petits groupes sur la nature de la formation pédagogique des contre-maîtres et des surveillants; le rôle du service du personnel dans l'organisation; les problèmes de recherche, etc., 417 pages [2]	Fl. 2.50	3.50
Le développement des relations fondamentales dans l'industrie dans les E. U. A., 116 pages (réimprimé du rapport sur le Congrès de Cambridge, 1er vol.) par H. S. Person, W. V. Bingham, C. R. Mann, W. J. Donald, Florence C. Thorne et G. A. Bowers [3]	Fl. 0.60	0.60
Sommaire et Conclusions du Congrès de Cambridge, par Mary van Kleeck, Director, Industrial Studies, Russell Sage Foundation, New York, 17 pages, (réimprimé du rapport sur le Congrès de Cambridge, vol. II.) [4]	Fl. 0 10	0.25
L'Elimination de la fatigue inutile dans l'industrie (Rapport du Cours d'été tenu à Baveno, Italie, en Juin 1927) 129 pages [1]	Fl. 1.50	1.50
Rapport du Congrès de Flessingue (Hollande) en 1925 (auquel l'association fut fondée) 491 pages [2]	Fl. 2.50	3.60

[1] Se compose de contributions dans la langue originelle (français, allemand ou anglais.)
[2] Contient des contributions dans la langue originelle et en quelques cas spéciaux une traduction dans les deux autres langues.
[3] Seulement en anglais.
[4] En français, anglais et allemand.

OFFICERS AND MEMBERS OF EXECUTIVE COMMITTEE

VORSTAND UND GESCHÄFTSFÜHRENDER AUSSCHUSS

MEMBRES DU BUREAU ET DU COMITÉ EXÉCUTIF

President:

Mr. C. H. van der Leeuw
Partner Messrs. de Erven de Wed. J. van Nelle,
Rotterdam, Holland.

Vice-Presidents:

Miss M. L. Fleddérus
Consultant on Industrial Relations,
66, Javastraat, The Hague, Holland.

Miss Mary van Kleeck
Director Industrial Studies, Russell Sage
Foundation, 130 East 22nd Street,
New York, U. S. A.

Herr Erich Lübbe
Werkzeugdreher, Vorsitzender des Gesamtbetriebs-
rates, Siemens-Schuckert A.-G.
Berlin-Siemensstadt.

Treasurer:

Herr Dr. F. Meyer zu Schwabedissen
Mitinhaber der Fa. Bertelsmann & Niemann
Ulmenstrasse 13, Bielefeld, Deutschland.

Members of Executive Committee:

Dr. A. Correggiari
Consultant on Industrial Relations
Fabbrica Italiana Magneti Marelli
Sesto San Giovanni, Milano, Italia.

Herr H. von Haan
Chief of Information Section,
International Management Institute,
Geneva, Switzerland.

Dr. G. H. Miles
Assistant Director National Institute of Industrial
Psychology, Aldwych House,
London W.C. 2, England.

Mr. Spencer Miller Jr.
Secretary Workers' Education Bureau of America,
476 West 24th Street, New York, U. S. A.

Miss L. C. Odencrantz
Director Employment Centre for the Handicapped,
407 Second Avenue, New York, U. S. A.

Frau Dr. Frieda Wunderlich
Bureau für Sozialpolitik, Nollendorfstrasse 29/30,
Berlin W. 30, Deutschland.

Secretary:

Miss E. Brenda Voysey B.A.
66, Javastraat, The Hague, Holland.

CHECKED
2003-04