magine that a large industrial concern desires to issue nev pital stock. The ordinary process is for it to go to its nkers. Bankers talk over the situation, and if they think nerally well of the plan, they ask the industrial company have its financial condition certified to by an impartia sinterested concern of public accountants. Bankers also t, either from those accountants or directly through a firm industrial engineers, a certificate as to the condition of the ant and the equipment. Those certificates appear in the ospectus of the new securities, and stand to the investing blic as a mark of the care taken by the bankers before they ad their names to the flotation of the securities. It also sures the public that the concern did not have capital tied in unnecessary stores; that its methods of stores keeping ere in keeping with economy.

The day is not far distant when the same bankers will mand a third certificate, in connection with any such transtion. The third certificate will testify to the industrial retions existing within the concern. It will be made by dustrial counselors, and will certify as to the industrial lations existing in this concern. This concern may have a od bill of health on the first two points, and yet in the next months they might have a strike on their hands which ould make their securities worth nothing beyond the pieces paper they are written on.

I think that third certificate will read somewhat as follows "We have investigated the condition of the X. Y. Z. Co. st, as to questions of fundamental organization, particularly their relation to the economic and social forces of the day cond, we have examined all questions of personnel such a scription of jobs, selection and development of personnel ird, we have investigated questions of rates, amounts and ethods of pay; fourth, we have examined questions of titude toward labor unions; and all forms of association th, we have investigated relations to labor laws, both state id federal, and to court decisions affecting labor; sixth, w ive investigated questions affecting the relations of the con rn to the public, particularly in matters of safety, sanita on, health and regularity of employment; and we find that le X. Y. Z. Company is giving due attention to the human lations in industry and is not likely to be involved in serious bor trouble or to carry a heavy burden of dissatisfaction

Such a certificate may seem like the wildest dream to rge percentage of employers in the world to-day; but it will longer seem so when we can educate ourselves to the point being willing to move on from some of the outworn politi I and economical and social theories of our time and give these problems some of the thought now given to question finance and plant. The manufacturer will then change om the condition of a blind or honestly puzzled employer inging to traditions of inherited belief in a worn-out eco mic and social theory, into a business-like practical sense the concrete industrial forces and opportunities around

In making an audit of this kind—an industrial audit—the st task of the industrial counselor is to get the concern iented. This means analyzing its organization and finding it whether this organization has effective roots in moder onditions. For example: A concern which is found to be oing nothing toward some form of self-government among e employes, can get from me no honest certificate of secu ty against labor troubles.

One of the first things a concern anxious to get headed

right must do is to lift its employment department from a subordinate place in some operating department to a level with the manufacturing, selling and accounting branches, and place it directly in charge of a partner or major manager, one of whose chief duties it shall be to develop a perpetual human audit of the kind I am suggesting here. With this personnel branch of its business thus developed at one end of its line of major functions, and some form of internal association among all its members developing at the other end of the line, the concern will become more and more conscious of its real industrial status. From a business point of view no organization of this kind can or should be defended except on the ground either that it pays or that it is necessary in view of existing or imminent law. In saving this I am not for a moment denving to business men other virtues than business virtues; but it is a cardinal point of good business administration, as of ethics, to keep pay and patronage apart.

Don't be led astray by the size of the job when I say that the head of the personnel division of a concern must be actively in touch with economic industrial, social and political forces of the day; he must be alive to the meaning of trade. unionism: he must be able to distinguish between its constructive meaning and its destructive meannesses. He must be equally ready to admit the meannesses of his fellow managers, and anxious about their constructive side. He must be alive to the trend of even the humblest business toward a status in the public service, for the public character that our railroads have taken will be rapidly followed by an effective public interest in the foods we eat and from which we are individually powerless to bar the poison. I am not asking that the personnel manager shall approve of these things. It is not a question of approval or disapproval, but he must be alive to them. So he must be alive to the growth of co-operation, to the real contribution of the trusts, to the growth of consumer's controls, to the backwardness of our educational system as a whole, despite its noble exceptions. He must be alive, still whether he agrees or not, to "votes for women" and the feminist movement. For the personnel manager, in order to be fit for his job, must be an industrial counselor.

And these are questions which affect your business. And when you go to put them clearly down on paper and to analyze them, you will find them not more numerous or more varied than the problems you face in your selling and manufacturing departments and in your accounting department.

While not more numerous, and not more varied, it is true they are more subtle; harder to get a line-on because just as in physics you have a number of variables, full of different elements. Yet nevertheless it is fairly definite at that end. And at the other end of science you have the whole field of socialism, which is full of the definite and intangible, and yet it is capable of scientific analysis

Having charted the situation of the concern in these questions of fundamental organization, the industrial auditor passes on to questions of personnel. At the bottom, the concern is its own business personnel. What are the fruitful sources of labor supply for the concern? Except at the bottom grades is the concern itself its own best resource? It should be. Roads up, out, and in, should be developed. Its basic discipline should be its own educational system. Its foremen and superintendents should be teachers instead of bosses. Are the jobs clearly stated? The best concern to-day has criminally wasteful gaps between functions and overlapping of functions. Are the wastes of selecting wrong people for jobs minimized? Is the concern alive with useful counsel one to another? Are individual friction and lealousy seared

and withered and co-operative spirit drawn forth by the magnetic power of what the concern as a whole stands for, clearly held in the minds of each individual within it?

The industrial auditor then passes to questions of pay. Is the wage system already beginning to be modified by some form of profit and loss sharing, which, by the way, can only healthfully exist when a concern has at least rudimentary beginnings toward that bogey of the unawakened employer 'called "share in the management." The verbal bogeys lose their terror before easily installed sane beginnings of selfgovernment. What do the people make by the week, by the month, by the quarter, by the year?

Out of the pay envelope must come the living powers of employe and manager. For both, the questions are vital of savings, of insurance against illness, accident, unemployment, old age and death; of housing; of purchasing power; and of such social questions as health, education and recreation. That is what each one in this room is up against, whether he considers it or not. To what extent may the concern, and should the concern, efficiently share in these?

And from these more internal questions of organization, personnel and pay, the industrial auditor proceeds to the relation of the concern to labor organizations, labor laws. and public standards. If the concern deals with labor unions, are its dealings merely defensive or are they constructive? Does it take a legitimate hand in seeing that wise laws are framed, or does it fight the principle of a new labor law in toto and stand aloof from details only to be handed later an inefficient statute, a hybrid output of timid politicians and sentimental philanthropists? Are the employes safe from fire and accident? Are conditions sanitary? Is the need of a healthy personnel understood? The shifting force in a large business is at once, perhaps, the greatest waste of our times both from the point of view of the business itself and the community.

The development of the technique of an industrial audit is. of course, in its infancy. But already the constructive power of merely asking these businesslike and practical questions in an ordered and businesslike fashion has been wonderfully fruitful. They open up new horizons to business enterprises. The organization chart of an old time industrial engineer showed a lot of pretty oblongs or ovals connected by interesting lines. Functions and positions held impersonal sway among them. In the new organization chart, the people appear by name; the best paper organization in the world is nothing apart from the men and women who run it. The quality of the personnel is the last and greatest fact in business solvency.

Today when a business concern gets into labor troubles the usual course is for the management to call in their lawyer. As a rule, lawyers have no grounding in the industrial problem; and furthermore, the methods and practices of our courts are not at all the methods and practices proper to the decision of industrial questions. That is one reason why the courts are not the arena in which labor problems can be successfully tried out. Courts are not equipped either with the knowledge or with the machinery. Many lawyers, of course, as individuals, have gone into various aspects of the industrial problem, and some of them so deeply and skilfully as to have been already in a position of substantially practising another profession alongside of their legal profession.

The industrial counselor should not be the advocate of either side in a controversy, helping it to put its own ideas across. He should be a master in the growing laws of industry and should have it specifically understood in connection

with every service he performs, that his job begins and ene by helping his client to understand and fulfil those lave Thus he is valuable either to employers, employes, or ts public, and whichever is his client, in the sense of pavihim, can expect from him only such service as is to the it terest of all three parties. No scientific and just servi could be built on other grounds. It must be understood the his job begins and ends by helping his clients to understar and fulfil those laws; and thus he is valuable alike to ei, ployers, employes and the public.

Possible Relations of Scientific Management Unions

Suppose a manufacturer should say to me, "I wish to sta equip and run a new plant in a certain section of the country I suppose the ordinary method would be to begin to deci about the size of the plant, what you would make, etc. Aft you had decided what you were to manufacture you wou start to consider building the plant and equipping it, and t processes of manufacture and management. And after was all together you would expect to nick un your lab

The first thing that I would do if I were confronted wi such a proposition would be to make a study of the lab situation in that locality before the ground was broken. first thing I would do would be to take up the question labor supply, with all of the existing sources of labor supply at that time. I would go to the labor unions and raise the questions in advance that might be raised afterward as far as one could humanly foresee them. Next, I would show that insofar as there were any unions in that vicini connected with those trades-I should run a preferent shop-I would appeal to the unions for men before I a pealed to anybody else. If they could give the men I want I would take them in preference to anybody else. Then would say that I would pay as the piece rate of my wag the union rate in that vicinity, regardless of whether or n the shop was unionized. And any other methods of p would have to be built on that.

Then I would make the union mad by telling them that would pay a minimum wage in that factory, My gre quarrel with the union men is that they have their min fixed on so much an hour, and they are giving shameful too little attention to the idea that a week is the shorte unit a man can count on.

I would like to see the union leaders awaken to that jo and see that the ideal of employment is not the week. b it is one year. A year containing the four seasons is the lo est ideal unit of planning which one should engage in. B if one could get industry on a carefully graded weekly bas instead of the hourly rate, a great step in advance would

When I put that question to a small group of manufa turers the other day, they came back and said, you could not afford to pay the minimum wage in some ca astrophic time?". Then I said, "That concern should be c clared industrially insolvent, exactly as they do when a m does not meet a note or a company does not meet to interest on its bonds.

Then I would demand that you should plan as far as y possibly could for regularity of employment; first by reg lating your own business to the greatest extent possible, a secondly, that you establish and have some idea of co-oper tive relationship with other concerns in other lines of inditry, so that when your slack period came, when yours car against his full period, you could make some shift to t