

ciently as well as plenty of leisure used satisfactorily.

What is there for the visitor from the United States to take home? Besides the fact finding, there is the courage to dare to be natural, to plan for people what they really like as well as what one feels they need, to face the superficial criticism of those who consider it high-brow to make fun of all conferences that aim to teach values as well as technic; and the taking part in and profit secured by contacts with people who preach and practise service, and who dare to meet to study those things from which power to serve comes.

From here we went on to Baveno, for the first Summer School and the Council Meeting of the I. R. I. This group, the "International Association for the Study and Improvement of Human Relations and Conditions in Industry," started in Argeronne in 1922. It held a Congress in Flushing in 1925 and a Council Meeting on the Rigi last year, where "The Human Element in Scientific Management" was discussed. As a result of that meeting, a Summer School on Fatigue was planned for this summer.

It met—June 19 to 23—on one of the beautiful Italian lakes, a study group of about fifty, representing thirteen nationalities. There were engineers, economists, physiologists and psychologists, employers and employes—including managers, foremen and workers,—factory inspectors and welfare workers, and all with a deep interest in industrial problems. Most of them brought years of actual experience in industry as a background for the week of intensive study.

To the chairman, the group itself was a subject of never ending interest. Not easy always to confine to formal procedure, seeming at times rather to resent necessary routine and time schedules, it listened hour after hour to technical lectures and translations with untiring interest. It participated in discussions with a grasp on essentials, a measurement by standards of practice and a passion to make everything learned of direct and immediate service that was most impressive.

The lectures fell into several categories. There were those on the history of fatigue study, given by Professor Giovanni Loriga of Rome and Madame C. B. Thumen of Paris. Mr. Joseph Piacitelli, of the Barber Asphalt Company, New

Jersey, lectured on the application of fatigue study to a specific industry. Dr. Otto Lipmann of Berlin spoke on the length of the working day and the results. The lectures by Dr. H. M. Vernon and Mr. H. C. Weston of the Industrial Fatigue Research Board of London were on fatigue caused by extremes of temperature, dust and damp, and on eye fatigue, and those of Professor Thomas Pear of Manchester were on work and temperament.

It was almost impossible to evaluate the impression made by these lectures at the time, and it is difficult to do so even now. Probably the effects were as varied as the listeners. Some evidently found the historical lectures most helpful, as explaining conditions we see, and outlining methods of investigation. Others found the results of practical experiments most helpful, as giving remedies for evils we all meet. Still others found the lectures that combined the findings of the psychologist with those of the psychiatrist, and explained *why* people act as they do, most fundamental and stimulating. Professor Pear has a special knack of making hard things sound easy and attractive, and it is only after one thinks over what he has said, or reads his abstracts, that one realizes how deep he has gone into ultimate causes.

The lecturers were submitted to perhaps too rigid an ordeal during the discussion periods. The usual questions which a speaker might be asked were supplemented by criticisms and the frankest personal reactions. This may be excused by the fact that this was a conference as well as a study group. Only a study of the personnel of the group could give an idea of the interest of these discussions. There were representatives—official or unofficial—of the Institute of Industrial Psychology of London, as well as of the Industrial Fatigue Research Board, of the International Labor Office, of the new International Management Institute, of the International Scientific Management Congress to be held this September at Rome, of the Schweizer Verband Volksdienst and of the various national scientific management and welfare groups in Europe, as well as of the four management groups in the United States. With all these, widely diversified and highly significant reactions were inevitable. There was an employer who stressed the need of making industrial work places beautiful as well as efficient; another who demonstrates

through service as a working officer of this group a very practical interest; a third who brought a group of his "boys and girls" up from the factory to show not only how well they could sing, but how healthy and happy they looked; a worker who stated in telling phrases obligations of the various parties to industry and outlined the fundamentals of industrial economics; a factory inspector who preaches and practises a real philosophy of work, and a group from one English factory representing management, foremanship and workers—all fatigue students.

The results of the meetings, so far as findings are concerned, are not easy to put into words, but an attempted summary follows. The abstracts of the lectures, discussions and findings will soon be available in print.

1. No satisfactory definition or measure of fatigue has as yet been made, though more careful distinctions than previously between, for example, fatigue and weariness, monotony and repetitive work are being drawn.

2. A clearer knowledge was acquired of the investigations that have taken place and those that should be made.

3. A body of facts on fatigue elimination was collected, evaluated and made available.

4. Methods of investigation—laboratory and plant—were stated, evaluated and made available.

5. An outline was worked out not only of *what* works in practice, but of *why* it works.

6. A realization was gained that likenesses between fatigue problems in all countries and in all types of industries warrant co-operation, but differences mean the need of adapting methods to national, group and individual needs.

At the Council meeting of the I. R. I. that followed the Summer School, its sessions were commended, and it was decided to hold similar schools on related subjects yearly between the triennial Congresses. The next Congress will be held in the summer of 1928 in England—probably at Oxford—during the end of June and the beginning of July. "Fundamental Relationships in Industry" is proposed as the subject.

From the I. R. I. meeting we went to Milan to spend a few days in visiting factories and psychotechnic institutes. I can imagine no greater thrill for a student of "human element" management than an experience like this. We visited an

alarm clock factory, beautiful outside and in, with a tool room that is a joy to see, machines that are, many of them, instruments of precision, and work that for quality as well as quantity reaches high standards. A magneto factory had an efficient planning department and motion and fatigue study that compares favorably with anything one can see in the United States. Instruction cards were at each work place and each was illustrated with a photograph of the method to be used. A laboratory is maintained not only for giving psychological tests, but for fatigue tests, where work places, equipment and methods are studied at the same time that parallel studies are being made out in the plant. This is under the direction of Dr. Correggiari, this year's host of the I. R. I. meetings. Safety is provided for; fatigue-eliminating work chairs are in office and plant; proper work clothing is worn; adequate food is to be had, and, best of all, the right feeling exists in this plant where the management spends as many hours and works as intensively in the plant as the workers, and where the workers look and act well and satisfied and talk as if they felt an essential part of plant, industrial and national prosperity. We liked especially the sign in the plant cafeteria, "Educated people do not swear." These people seem "educated" in the industrial sense; they are teachers and learners, and that is the ideal industrial relation.

Psychotechnic institutes—we visited two in Milan—are surprisingly similar internationally. The technic varies a little; naturally each exhibits and stresses tests invented by its staff, but all increasingly attempt to find *aptitudes* as well as *skills*, and *likings* as well as *abilities*. We find an increasing willingness to co-operate between physiologists and psychologists, institutionally, nationally and internationally, and to realize that the psychiatrist, too, has a part in this work. Tests for selection and placement are improving, becoming both more practical and more adequate. The great need everywhere now is for tests that will assure that a man is not too good for the job, and provide for promotion.

We also had the pleasure of meeting a group of university women, and of finding them, as we did later the group in Zurich, especially interested in the possibilities of eliminating unnecessary fatigue from the home, by applying methods that