verse and all that therein is, the aim of science is to add to itself, to enlarge its circle in all its branches until it has become all-embracing—an ideal no doubt impossible of attainment, but nevertheless continually stimulating the research worker and spurring him to further endeavor. But secondly, as science—ordered knowledge of facts—first arose from man's endeavor to understand the material and the spiritual world for the promotion of his own ends—the stars in their courses for purposes of agriculture and navigation, the ways of animals and plants for his own food, simple principles of topography and hence to mapping and geography that he might find his way about his own world, the beginnings of metallurgy that he might mould better weapons of bronze against his enemies still using copper or stone, so modern science, however much it may be pursued for its own sake, has nevertheless a practical end in view, in some sciences more remote than others. When the Augustinian monk Mendel began to cultivate sweet peas, with the object of learning exactly how tall and short peas when crossed passed on their qualities to their offspring and subsequent generations, it is unlikely that it was in his mind that the principles he was then to formulate would attain an importance we are only now beginning to appreciate—principles which when more fully understood will not only affect great financial interests in all undertakings—such for example as the meat and milk industries—in which questions of breeding enter, but may also affect very seriously questions affecting social reform and the future of the human race.

It would be possible to multiply almost indefinitely the questions of social and political well-being upon which the results of scientific research impinge no less directly than the theory of heredity. As these researches and many others affect the well-being of the citizen and the community directly, it is surely the duty of the press as a service of public utility and the man of science as a citizen as well as a discoverer, to effect a *rapprochement* in order to create a public opinion which will insure that no advantage may be lost which might accrue from the application of the results of scientific research to the needs and amenities of daily life. A more intelligent and more intelligible consideration of scientific work and thought is desirable in the public press because of their close contacts with many national and international problems. Under the conditions of modern civilization, the community in general is dependent upon science for its continued progress and prosperity. Under the influence of modern scientific discoveries and their applications, not only in industry, but also in many other directions, the whole basis of society is rapidly becoming scientific; and to an increasing extent, the problems which confront the national administration involve factors which will require scientific knowledge for their solution.

It is in these directions that the press can render the greatest service to science and the public at the same time. Under the present social and educational system, it is not possible to hope that at any very early date our schools will turn out a population of scientifically trained men and women. But it is becoming recognized, though slowly too, that what is needed is not so much detailed or expert knowledge of science, as the scientific outlook. The function of the press, more readily to be appreciated perhaps when something of this scientific spirit has been inculcated in the schools, might very well be, by fostering this outlook, to insure that the problems of government and administration, of society and of economics, are approached with scientific understanding. The problems of politics and society are not to be solved by the reiteration of party cries adopted by "little Liberals and little Conservatives," to use Gilbert's phrases of a bygone day, but by patient scientific consideration of the facts viewed in the full light of scientific knowledge and after a careful weighing of evidence. Here the press, without departing from its tradition, and if it is prepared to trust the interest and intelligence of its public, might serve itself, science and the state.

SCIENTIFIC EVENTS

RESEARCH ON NUTRITION IN GERMANY

THE regular Berlin correspondent of the *Journal* of the American Medical Association writes as follows:

"Federal health administration has been taken over by the Reichszentrale für Gesundheitsführung, which consists of eleven different federal *arbeitsgemeinschaften,* or mergers. The department of general nutrition is under the direction of Professor Reyher. A firm union of all the organizations combined in this department insures the avoidance of dangers that might threaten the enforcement of the common principles and prevents the special interests of any one group gaining the upper hand. In questions requiring special scientific study the federal bureau of health is ever ready to advise the members of the reichsarbeitsgemeinschaft, who are recruited from the different schools representing German research on nutrition. In addition to the testing of the modern principles of German science of nutrition, research on the biologic value of food products and the care of the foods themselves is being conducted. Emphasis

is placed on the hygienic importance of transportation of food products and their distribution among the population. Methods of preserving foods are studied. Furthermore, in collaboration with the federal bureau of health, the uses of skim milk and potatoes, as additions to bread, have been investigated.

"The investigation of proposed reforms in nutrition constitutes a special field of research. The reform movement has offered to cooperate with the reichsarbeitsgemeinschaft. A standing committee has begun to perform practical work, and it appears likely that the objectionable features of the reform movement, as pointed out by men of science, will soon disappear. This committee, in collaboration with the federal ministry for popular education and enlightenment, will control the publicity service, which is suffering from mismanagement, and if attempts are made to oppose such development, action will be taken to eliminate all opposition.

"The second department, under the direction of Professor Schlayer, has the task of elaborating and establishing dietetic criteria for patients in the hospital and in the spas and health resorts. It is also the duty of this department to establish criteria for the selection and training of the personnel responsible for the nutrition of patients and convalescents.

"A special journal will publish results of the research of the reichsarbeitsgemeinschaft and the associated committees that have to do with the nutrition of the German people. A separate department will issue reports from time to time on the general nutrition of the people and will announce special diets to be used solely for patients and convalescents. The creation of a popular journal, whose essentials are now being worked out, has been announced by Professor Reiter (president of the federal bureau of health) for the fulfilment of this task."

CONGRESS OF THE INTERNATIONAL SCIENTIFIC RADIO UNION

THE International Scientific Radio Union, according to the London *Times,* concluded a conference in London on September 19, when, at the closing session resolutions and plans for international research were adopted by the General Assembly. Professor E. V. Appleton, Wheatstone professor of physics at the University of London, was elected president of the union in succession to Professor A. E. Kennelly, of Harvard University. He will hold office until the end of the next congress, which is expected to take place abroad in 1936 or 1937.

The presidents of the five commissions into which the union is divided were elected as follows: (1) Radio-frequency standards, Dr. E. H. Rayner, of the British National Physical Laboratory; (2) Propagation of Waves, Dr. J. H. Dellinger, chief of the radio section of the U. S. Bureau of Standards; (3) Atmospherics, Professor E. V. Appleton; (4) Liaison with amateurs, Professor R. Mesny, France; (5) Radiophysics, Dr. B. van der Pol, Holland.

The success of the research planned at the Copenhagen meeting in 1931, in connection with work in Polar regions, and during the solar eclipse of 1932, which has permitted a definite decision to be made between competing theories, has led members of the union to organize a more extensive series of experiments of similar character.

The foreign delegates who have attended the congress have expressed themselves, according to the *Times,* as being very much impressed with the state of scientific radio research in Great Britain. In particular, the arrangements of the wireless services of the G.P.O. at Rugby have received special commendation because of the economic accommodation of so many antenna systems on so small a site.

Another subject on which continual work has been carried out since the Copenhagen meeting is that of the development of standards of radio frequency and the comparison of the national standards in different countries. The National Physical Laboratory and the British Broadcasting Corporation have cooperated in this service by generating oscillations of a very steady frequency at Teddington, and transmitting them over Europe by radio stations of the B.B.C.

Agreement on the value of the frequency ascribed to such standardizing emissions, which are usually made in the early hours of the morning, by national laboratories receiving them, has attained an accuracy of one part in 10,000,000. This achievement holds great promise for enabling new methods of physical research to be developed in addition to ensuring a high accuracy among the standards of different nations by which commercial frequencies are measured.

OPENING OF THE NEW LILLY RESEARCH LABORATORIES

THE new Lilly Research Laboratories at Indianapolis were formally opened on October 11 in the presence of well-known investigators in the various branches of medicine. Eli Lilly, president of the company, was chairman at the formal exercises and J. K. Lilly, chairman of the board, addressed the assembly on "Research in Manufacturing Pharmacy." Dr. Irving Langmuir, associate director of the Research Laboratory of the General Electric Company, discussed "The Unpredictable Results of Research"; Sir Frederick Banting, of the University of Toronto, spoke on "The Early History of Insulin"; and Sir Henry Dale, chairman of the British National Institute for Medical Research, delivered an address en-