radiography, biology, etc. Photographs should reach me not later than Thursday, July 1. They should be mounted but not framed.

I should be glad if any worker who is able to send photographs will communicate with me as soon as possible so that I might arrange for the receiving and entry of the exhibit.

A. J. NEWTON

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.,

QUOTATIONS

COMPETITION IN RESEARCH

THE resignation of Professor Ernest Fox Nichols from the department of physics at Yale University in order to continue his research work upon a larger scale in the Nela Research Laboratories of the National Lamp Works at Cleveland, offers a new impression of the possible utilization of professional talent. Professor Nichols resigned the presidency of Dartmouth College to come to Yale where there was a greater promise of his continuing his scientific work, and now leaves Yale to enter the employ of a private corporation whose opportunities for scientific work on a much enlarged scale are even greater.

The loss to Yale of the fine influence of Dr. Nichols' personality is obvious. That is something to be deeply regretted but, taking him as a type of trained scientists, whether the withdrawal of such men from the universities of the country and their employment by large corporations whose interest in scientific research is more direct is to the common disadvantage may seriously be questioned. The limitations which are necessarily set upon work of this character even in the best equipped of university laboratories disappear in corporations where no limitations are set when the importance of the end sought is realized. In the case of Dr. Nichols the work which he wishes to accomplish has such great importance in its actual accomplishment that his transfer must be considered as of greater general advantage because it may be accomplished the earlier under private rather than under university encouragement. The theoretical disadvantage which results to the university is in all likelihood offset by the practical advantage to be commonly gained.

Speculation is here invited as to what the effect will be upon the teaching force of a university if the labor of research work of a scientific character is to be taken over by private corporations. We might imagine affirmative and the negative coming to blows over this thesis at least until the lessons of experience have been written into the record. —*The New Haven Journal-Courier.*

A NEW STATISTICAL JOURNAL

THERE has recently been founded a new international statistical journal called *Metron.* It is published at Padua, Italy, at a subscription price of 40 lire per year. The printer, where subscriptions should be sent, is the *Tipografia Industrie grafiche Italiane,* Via Viscovado, Padova, Italy. The journal will appear quarterly, each number comprising 150 to 200 pages.

The founder and chief editor of *Metron* is Professor Corrado Gini, of the University of Padua. The fact that so brilliant and sound a worker as Professor Gini is to be in charge at once guarantees the scientific standing of the journal in the statistical field. An international editorial board has been formed, which now includes the following persons:

Professor A. Andreadès, de science des finances a l'Université de Athenes (Greece),

Professor A. E. Bunge, directeur de la Statistique de la Republique Argentine, Buenos Ayres (Argentine),

Dr. F. P. Cantelli, actuaire au Ministere du Tresor, Rome (Italy),

Dr. L. V. Furlan, libre docent de statistique a l'Université de Bâle (Switzerland),

Dr. M. Greenwood, reader of medical statistics in the University of London; statistician of the Lister Institute, London (England),

Dr. A. Julin, directeur de la Statistique economique de la Belgique Ministère de l'Industrie et du Travail, Bruxelles (Belgium),

Dr. G. H. Knibbs, directeur de la Statistique de la confederation australienne, Melbourne (Australia),

Ing. L. March, directeur de la Statistique générale de la France, Paris (France),

Dr. Raymond Pearl, professor of biometry and vital statistics, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland (United States).

The general editorial program may be set forth as follows:

One of the great difficulties in connection with modern statistics is that of becoming acquainted with the relevant literature; this is in fact derived from the work of very different schools and published in a variety of journals and transactions. It is necessary to consult mathematical, astronomical, technical, physical, chemical, actuarial, economic and financial, psychological, historical, legal, physiological and pathological, hygienic and medical, biological, genetic and eugenic and even purely zoological, botanical and agricultural publications.

It is true that generally such papers are merely applications of interest to specialists in the particular branch of knowledge. But this is not always the case and sometimes methods of general interest to all statisticians are to be found, or, again, we find in particular connections methodological problems enunciated and solved, the scope of hypotheses contained in certain analyses brought to light, the approximation of theoretical conclusions verified and advances made by different routes; progress of interest in all branches of statistics. Still more frequently the results of particular statistical investigations, even when they do not interest all statisticians, are of importance to those engaged in similar inquiries: thus results obtained in the field of anthropology, zoology, genetics or eugenics, hygiene, medicine, pathology, life insurance, political economy or history may be of great interest to the student of demography.

Whoever, desiring to enlarge the boundaries of statistical science as far as possible, is forced to consult the heterogeneous literature containing statistical papers must be aware of the inconvenience resulting from lack of coordination.

Valuable statistical data, carefully collected, scrupulously criticized, remain of no scientific value owing to their presentation and analysis by those unskilled in modern methods. Typographical difficulties offer obstacles to the publication of the original data in their integrity so that competent statisticians are unable to harvest the grain which the original author had not the skill to reap. Sometimes we meet with tedious, inconclusive, or even fallacious arguments where quite an elementary knowledge of statistical methods would have led to a simple and exact conclusion. Sometimes indeed we merely encounter—and this is the smallest evil—the rediscovery of an established truth or the reinvention of a familiar method, but how often do we not feel in reading the work of a writer, sagacious and profound in his own subject, that he would have greatly profited by a knowledge of other statistics published in journals quite disconnected from his specialty!

Within the limits appropriate to a review, *Metron* will endeavor to take the first step towards remedying these defects. It is addressed to those who, cultivating different soils with various implements, nevertheless are busied with statistics; that the results of their labors may become of general utility to science. It is hoped that *Metron* may be a bond of union between statistical workers in different branches, perhaps at length an organ of scientific coordination.

With this object, *Metron* will be catholic; its pages will be open to those who employ no methods beyond the scope of ordinary cultivated men as well as to those who delight in the most refined and subtle developments of mathematical science. There is indeed scope for both schools. Some problems can be solved by the older methods now part of the intellectual stock of all educated persons, others must be investigated with the help of more recondite procedures. Between these extremes are insensible gradations and both orders of inquiry interest science in general and statistical science in particular. It is hoped that both will find in *Metron* an appropriate treatment.

It can not of course be denied that, the simpler the methods employed, the easier is

the process of mutual enlightenment which *Metron* is intended to facilitate, since the number of readers capable of profiting by the exposition will be larger. The editors hope therefore that questions will be dealt with as their nature permits. But this is merely the expression of a desire not a condition of publication. The editors do not desire to put any compulsion upon contributors or to gainsay those who will forego a numerous audience for the satisfaction of expressing their ideas in the most concise and accurate style.

The sole necessary condition of approval for publication is that papers shall make a contribution to the theory or practise of statistics of original value and likely to interest a greater or smaller number of students of statistics. Contributions will be inserted as articles or notes in accordance with the importance of the subject matter. Frequently statistical researches lead to fragmentary results, insufficient to form the subject of a paper or even a note, but still offering something of scientific interest or perhaps filling a lacuna in other investigations. Such results will be published under a special heading.

In addition to a bibliography of publications received, each number of the review will contain one or more analyses of statistical works or of results perhaps taken from works not exclusively statistical in character. Each such analysis will deal with a particular branch of statistics, *e. g.*, demographic, sanitary, anthropometric or economic statistics. There will also be an analysis of sources and of mathematical work bearing upon statistics (calculus of probabilities, interpolation, etc.).

Metron is an international review. As it is published in Italy and consequently a majority of the editorial staff are Italians, no doubt the Italian language will at first preponderate in its pages. But the other great international languages, French, English and German, are admitted to its pages on terms of complete equality. It rests with contributors from other countries to increase their share in its pages and to cause to disappear any such difference. It is the wish of the editors that the participation of non-Italian writers shall become larger and larger.

It is believed that many American workers, in the fields of biology, agriculture, and genetics particularly, as well as statisticians in the narrower sense, will be interested in this new journal and wish to have it in their libraries, as well as to use it as a medium of publication.

RAYMOND PEARL

SPECIAL ARTICLES

FOOT-ROT OF WHEAT

EARLY last spring attention was called to the occurrence of a foot-rot of wheat in Madison Co., Illinois. Since that time I have made a study of the disease assisted at first by Mrs. E. Young True, employed by the Illinois Natural History Survey, and later by Mr. George H. Dungan, of the Illinois Agricultural Experiment Station.

From the first it appeared probable that a certain fungus was the cause of the disease and as early as last June our notes show that this fungus was universally present and that inoculations with pure cultures gave positive results. The evidence is now so clear and conclusive that I venture to present the following facts as fully established.

1. This fungus was isolated by transfer to agar plates from diseased lesions in practically every case where the attempt was made, even when superficial leafy coverings were stripped away and the remaining surfaces disinfected with mercuric chlorid. In all several hundred such isolations were made. Reports from pathologists in other states indicate similar findings there.

2. No other species of fungus or parasite of any kind, was constantly present, or present in any large percentage of cases.

3. The diseased lesions were always penetrated and largely occupied by a fungous mycelium that agrees in general character with the fungus in question.

4. The diseased wheat stems when placed in conditions of suitable humidity become covered with spores of the fungus.