the future than in the past. The ramifications of applied science naturally increase, and the delicacy and cost of research grows, the deeper we penetrate nature's secrets. There must be an increasing corps of workers, with the increasing extent and variety of the problems presented for solution. It is to be hoped that the institute may receive generous support in the coming years, and that its usefulness in carrying out the original objects for which it was founded may not be restricted by inadequate means of provision. Those among us who are of the older generation can hardly hope to see much of its future growth, but the heritage which the younger generation has received from the past should be the stimulus to continue and increase the good work which so far has characterized the work of the institute in its various forms. While the associations which have grown up around the old hall on Seventh Street stir many emotions in many of the older members, yet it is to be assumed that not many more years will elapse before the proposed new hall and library on the new site may become a reality.

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QUETELET'S SCIENTIFIC WORK

FIFTY years have passed since the death of one of the most remarkable men to whom Belgium has given birth, Quetelet. It is very much to be regretted that this important anniversary should have been forgotten officially. Yet we have here a fine and universally appreciated scientific reputation. Besides, it would have been an opportunity to recall the example of a life entirely devoted to science and animated by a glowing and strengthening enthusiasm.

At seventeen Quetelet took up teaching at a private college of Audenarde, a small town in Flanders. Six years after that, he took the degree of doctor of science at the University of Ghent, with a remarkable dissertation in the field of geometry. The following year he was received as a member of the Royal Academy. From 1823 on, he suggested that the secretary of public instruction should create an observatory in the southern provinces, Belgium forming at that time part of the Netherlands. This happy project was realized a few years later after much patience, perseverance and energetic effort. Quetelet, having been appointed head of the new institution, organized completely its scientific function. The attention and the appreciation of the learned world had been especially attracted to him by his statistical work. His first paper on demography: "Sur les lois des naissances et de la mortalité â Bruxelles" ("On the laws of birth and mortality in Brussels") was published in 1825. Ten years later his fundamental work: "Essai de physique sociale (sur l'homme et le développement de ses facultés)" ("Essay on social physics, concerning man and the development of his faculties") saw the light in Paris. It is a synthesis of Quetelet's statistical works. In that book, the author studies the average man, in his physical and moral aspects. This audacious theory was taken up again and completed in another work: "Du système social et des lois qui le régissent," ("Of the social system and the laws that govern it," 1848). In 1841, Quetelet was called to direct the activities of the Central Commission for statistics, of which body he soon made a highly famous institution. The last years of his life were devoted to an active and fruitful participation in the work of the international meetings for statistics, and to several works of a general character, namely to the preparation of a second edition of his "Social Physics" (1869). He died on the 17th of February, 1874.

Without being transcendental, Quetelet's mathematical work is interesting and original. His researches concerning the theory of caustics have opened the way for important work. Thanks to him the first Belgian periodical devoted to exact science was created, *La correspondance mathématique et physique* (1825). Finally, he is the author of a documentary work that is worthy of notice: "Histoire des sciences physiques et mathématiques chez les Belges" ("History of Physical and Mathematical Science in Belgium," 1864). Quetelet's activities in the field of astronomy have consisted in a particularly rich work along various lines, such as descriptive astronomy, magnetism, meteorology and terrestrial physics. It is necessary to mention especially his great work on the climate of Belgium. But his universal reputation rests, without doubt, on his statistical work. His name is closely linked to the history and the development of the science of statistics. His numerous papers on demography and his remarkable analytical and synthetical studies of statistics are important in many respects.

Quetelet was a master of statistical method. He also was its apostle. The work he accomplished in statistics is extensive and fundamental. Therein lies his real scientific merit. In a general way Quetelet's statistical doctrine can be thus characterized: to a monographical description of facts, to a systematical census of elements, he substitutes a scientific observation of the masses, a methodical survey of the groups, founded on the principles of the theory of probabilities. Thence one easily admits the fundamental idea that rules all Quetelet's statistical investigations: the statistical method is the application of the calculus of probabilities to the observation of facts. Sixty years ago this was an audacious and original doctrine. It

seems that Quetelet was right. The paper of 1845 "Sur l'appréciation des documents statistiques et la théorie des moyennes" ("On the valuation of statistical documents and the averages"), was a first step in the science called biometry to-day. On the other hand, the actual prodigious rise and the important developments of mathematical statistics justify Quetelet's idea of considering the statistical method the function of the calculus of probabilities.

For Quetelet, statistics are a science. If this is so, it is not sufficient to collect documents and numbers, taking care only to group them so as to make comparisons more easy. That is administrative statistics. There is also the more important scientific side which valuates the documents and the results, and draws conclusions from them. That is scientific, or better, mathematical statistics, to which all administrative statistics must aim. A hundred years ago, Fourier said: "Statistical researches will make no real progress until they are performed by those who have thoroughly investigated mathematical theories."

It has been rightly said that Quetelet's average man died before his author. The average man, far from being, in a way, the type of the species, is simply impossible. Cournot and Bertillon have given a justified and definite criticism of this theory of the "type." As to the average moral man, he is a pure mathematical fiction. To-day that theory is quite forgotten.

Quetelet was a great Belgian. Endowed with a superior mind, a high and clear intelligence, being a real scientist, a persevering investigator, he has given a vital impulse to the study of science in Belgium. His work is complex; it abounds in valuable and deep teachings. Quetelet was a real statistician. For more than a quarter of a century he has been an important figure in the intellectual life of Belgium. He has truly given momentum to Belgian thought.

CONSTANT LURGUIN

UNIVERSITY OF BRUSSELS

SCIENTIFIC EVENTS

NEW MEDICAL CENTER IN NEW YORK CITY

A NEW medical center, which is to cost approximately $20,000,000 and is to embody the latest developments in cooperation between hospitals, medical colleges and research institutions, is assured for New York City with the announcement by the Board of Managers of the Presbyterian Hospital of its decision to erect a building jointly with the College of Physicians and Surgeons of Columbia University at Broadway and 168th Street.

According to the New York *Times*, the structure, which will be the center of a group of buildings, will cost $10,000,000, exclusive of the land. That section to be occupied by the College of Physicians and Surgeons will cost $3,000,000. This amount has already been subscribed. The Presbyterian Hospital section will cost $7,000,000, of which $2,500,000 is available, leaving $4,500,000 still to be raised.

When the medical center is completed there will be available in one place the services of leading specialists in every branch of medicine. It is said that the institution will surpass Berlin, Vienna or any other center in Europe. This will be the first complete adaptation of the medical center idea to the needs of New York City. It is planned to include, in a well-coordinated form, every type of special hospital and institution necessary for the treatment of any patient and the training of any specialist who has to do with the protection and promotion of health.

The tentative plan was first announced three years ago. Since that time careful study of the medical centers now in operation at Johns Hopkins, Harvard, Yale and other institutions has been made by the joint administrative board.

In addition to facilities for the care of patients, the new building will provide a place for scientists to collaborate in research work, and will have the equipment for training practitioners. Thus the center will embody three branches—care, research and teaching. It also will contain a nucleus for a medical group of wider scope, and it is expected that around it will be drawn such institutions as a dental school, a maternity hospital, a children's hospital and a neurological institute.

The hospital section of the building will be directly connected with the medical college. Faculty members, who will also be on the staff of the hospital, and students observing, will thus no longer lose the time they now must spend in going between classrooms, hospitals and laboratories scattered in various parts of the city.

The private pavilion, with 125 rooms, will also be attached to the building, and the income from these rooms will be devoted to meet the cost of free work in the wards. One of the features will be private rooms to be rented to relatives and friends who wish to stay near patients.

Within a short time the Presbyterian Hospital will launch a campaign—the first public appeal it has ever made—for gifts in order to raise the $4,500,000 necessary to complete the building fund. Members of the building fund committee are Thatcher M. Brown, Cornelius R. Agnew, the Rev. Dr. George Alexander, Robert W. Carle, Henry W. de Forest, W. E. S. Griswold, Dean Sage, Johnston de Forest, Samuel H. Fisher and William Sloane Coffin.