

cited the nervous events associated with the state of consciousness do indeed play a conspicuous rôle. If, however, the essential thing about this reaction is what we have suggested, namely, that the connection between afferent and efferent fibers is a path blazed through the nervous substance rather than a definite localized conduction through specialized neurones, it would seem that consciousness comes so frequently into play merely because it is through the nervous substance of the cerebrum that such paths can be blazed most readily, and the activity of cerebral centers carries with it as a usual thing a state of consciousness. If this be true there is no reason why conditioned reflex associations may not arise between subcortical as well as between cortical centers; it is only necessary that the centers be simultaneously active, reflexly or otherwise; and possibly some cases of associated action of two bulbar or spinal centers—respiratory and vaso-motor, or respiratory and cardio-inhibitory—may be of this kind rather than distinct collateral connections between the neurones of the two centers. This is, of course, only a surmise, but it is clearly a possibility and certainly there is no evidence whatever to exclude it. We have been too quick to assume that coordinations are always effected by the same mechanism, and that too the kind of mechanism pictured in our typical reflex arc. An unproved assumption; and so long as it is an unproved assumption it is the logical thing to keep in separate categories the two classes of reactions which to-day are almost universally thought of as one and the same.

THEODORE HOUGH

UNIVERSITY OF VIRGINIA

*THE DEDICATION OF THE NEW BUILDING
OF THE MELLON INSTITUTE*

THE new \$350,000 building which will form the permanent home of the Mellon Institute

of Industrial Research and School of Specific Industries of the University of Pittsburgh, was formally dedicated on February 26. This building, the gift of Messrs. Andrew William and Richard Beatty Mellon, of Pittsburgh, was especially designed for the needs of the institute; it is distinctly modern in every respect, and complete facilities are provided for the investigation of manufacturing problems and for conducting industrial research according to the practical system of cooperation between science and industry, founded by the late director of the institute, Dr. Robert Kennedy Duncan. By this system, an industrialist having a problem requiring solution may become the donor of a fellowship by providing the salary of the researcher selected to carry out the investigation desired, the institute supplying every facility for the work—laboratory space, the necessary apparatus and supplies, library facilities and advice of a staff expert in industrial research, etc.

The new home of the Mellon Institute is a five-story and attic building. The basement contains seven rooms: the main storeroom, the boiler room, the electric furnace room, a heavy apparatus room, a room equipped for low-temperature work, the machine shop and a kitchen. On the first, the main floor, are located the general office, the director's suite, the office of the editorial department, the library, the office and laboratory of the assistant directors, the assembly hall, a special apparatus room and a dark-room laboratory. The second and third floors each contain ten large research laboratories and nine small ones; the fourth floor, which is not finished, will contain an identical number of laboratories as soon as the growth of the institute warrants its completion.¹ At the present time twenty-three fellowships are in operation and forty research chemists are engaged in a study of the variety of industrial problems under investigation at the institute.

While the Mellon Institute possesses an endowment of its own and has its own board of trustees, it is an integral part of the Univer-

¹ For a full description of the new building of the Mellon Institute, see *The Journal of Industrial and Engineering Chemistry* for April, 1915.

sity of Pittsburgh. The dedicatory exercises were accordingly held in conjunction with the annual charter-day exercises of the university.

The chancellor of the university, Dr. Samuel Black McCormick, presided at the dedication ceremonies, which took place at 11:00 A.M. in Soldiers' Memorial Hall. Following the address of the day by Dr. Rossiter Worthington Raymond, the dean of American mining engineers, on "Knowledge and Research," Dr. W. J. Holland, director of Carnegie Museum and formerly chancellor of the university, made the presentation speech in connection with the dedication of the Mellon Institute, on behalf of Andrew W. and Richard B. Mellon, the donors. After a brilliant eulogy of the Messrs. Mellon and a splendid tribute to their generosity, Dr. Holland said in part:

In a certain sense, Mr. Chancellor, this building is a memorial to Robert Kennedy Duncan. On one side of the entrance is a bronze slab inscribed with the name of Thomas Mellon; on the other side of the entrance is a bronze slab inscribed with the name of Robert Kennedy Duncan. But, Mr. Chancellor, this splendid edifice erected upon the campus of our university is more than a cenotaph. It not merely commemorates the names and careers of those of whom I have spoken, but it is intended to serve as the seat of advanced inquiries along scientific lines, which will tend to the promotion not merely of intellectual culture, but of industrial success, and that not merely in this great "workshop of the world," where it is located, but throughout the land. In creating this institution our dear friends have been actuated by a high and intelligent purpose. Large experience in great industrial enterprises has taught them the importance of chemistry and physics in their application to the industrial arts, and they feel that, wonderful as has been the progress made within the last century, there are untold mysteries in nature which have not yet been revealed, but which, if uncovered, are capable of being used for the welfare of mankind. And so they have created and are to-day placing in the custody of you, gentlemen of the board of trustees, this institution, which is capable of becoming, when wisely and intelligently administered, a mighty implement for the advancement of human welfare.

Dr. George Hubbard Clapp, president of the board of trustees of the university, delivered

the speech of acceptance. He expressed appreciation of the gift and understanding of the importance of the work for which the building has been erected.

The final ceremony of the exercises was the conferring of fifteen honorary degrees, as follows:

Doctor of Laws

Edward Williams Morley, honorary president of the Eighth International Congress of Applied Chemistry.

John Ulric Nef, head of the department of chemistry of the University of Chicago.

Arthur Amos Noyes, professor of theoretical chemistry and director of the Research Laboratory of Physical Chemistry, Massachusetts Institute of Technology.

Rossiter Worthington Raymond, secretary emeritus of the American Institute of Mining Engineers.

Ira Remsen, former president and professor emeritus of chemistry, Johns Hopkins University.

Theodore William Richards, professor of chemistry and director of the Gibbs Memorial Laboratory, Harvard University.

Doctor of Science

John Jacob Abel, professor of pharmacology, Johns Hopkins University.

George Hubbard Clapp, president of the Pittsburgh Testing Laboratory and of the Board of Trustees of the University of Pittsburgh.

Elbert Henry Gary, chairman and chief executive officer of the United States Steel Corporation.

John Hays Hammond, consulting mining engineer.

Henry Marion Howe, former professor of metallurgy, Columbia University.

Doctor of Chemical Engineering

William Hultz Walker, professor of chemical engineering, Massachusetts Institute of Technology.

Milton C. Whitaker, professor of industrial and engineering chemistry, Columbia University.

Doctor of Chemistry

Charles Lathrop Parsons, chief mineral chemist, Bureau of Mines.

Edgar Fahs Smith, provost of the University of Pennsylvania.

Immediately after the close of the dedicatory exercises, the trustees, faculty and guests of the university met at a luncheon in the University Club. The remainder of the after-

noon was devoted to an inspection of the new building of the Mellon Institute.

The recipients of honorary degrees were the guests of the university at the annual alumni banquet held at the Schenley Hotel from 6:00 to 8:30 P.M. The speakers at this dinner were Dr. Raymond F. Bacon, director of the Mellon Institute, who responded to "The Mellon Institute"; Dr. Walther Riddle, who gave a historical sketch of the department of chemistry of the university; Hon. Elbert H. Gary, chairman of the United States Steel Corporation; Dr. Theodore William Richards, who spoke on "The Practical Use of Research in Pure Science" and extended Harvard's congratulations to Pittsburgh upon the acquisition of the Mellon Institute; and Chancellor Samuel Black McCormick, who completed the toast list with an eloquent response to "The University," in which he stated that the gift of the Mellon Institute had placed a great responsibility upon the University of Pittsburgh as well as having been a priceless acquisition; that the university was ready to meet the responsibility and, he felt sure, would show the donors and the country at large that it would make the most of the great benefaction.

Judge Gary's address was in part as follows:

In humankind there is an element which is interested in, if, indeed, it does not actually enjoy reading or listening to, adverse references to the character or conduct of an individual or association of individuals, and, by reason of this fact, agencies for the collection and distribution of unfavorable comments have become more or less popular. A questionable kind of success is often realized by the individual or the publication whose energies are devoted to frequent and furious personal attack against the standing or the action of others. These efforts sometimes take the form of individual work, investigations by committees or commissions created by the legislatures or congresses, or, in exceptional cases, even by judicial branches of government, such as grand juries, with their inquisitorial power. Oftentimes the investigators are not only utterly incompetent, but they are prejudiced and willfully repress many of the pertinent and material facts. They seek to produce for circulation and criticism only information calculated to bring reproach upon the persons involved in the inquiry. No one is exempt from these criticisms.

Circumstances seem to show that we are approaching the time when the investigator will be investigated; when the criticizer will be criticized; when committees and commissions will be brought before other similar bodies for judgment. It would be interesting to the public if it could be informed of the real motives which have prompted some of the official inquiries, and if it could learn of the unfair methods which have been sometimes pursued, and if it should know the amount of governmental funds which have been appropriated for the use of committees and how they have been disbursed; in fact, if some of those participating could be subjected to the same scrutiny which they have exercised.

The general attitude of the great newspapers of to-day is fair and just. They influence and are influenced by the general public. They reflect the general sentiment. This is most important in considering the future welfare of this country.

If the picture which I have drawn is a true one, then the course before us, which leads to prosperity, success and happiness, is plain and we will pursue it. We must conduct affairs in our charge with the expectation that we shall be criticized.

After the banquet, the new building of the Mellon Institute was thrown open for a reception of friends of the institute. The rooms of the main floor were used for the reception, although the entire building was open for inspection. On the evening of February 27, the first Mellon lecture was delivered by Professor John Jacob Abel, of Johns Hopkins University, in the assembly hall of the institute; Dr. Abel's subject was "Experimental and Chemical Studies of the Blood and Their Bearing on Medicine."

W. A. HAMOR

THE MELLON INSTITUTE OF
INDUSTRIAL RESEARCH

CHARLES EDWIN BESSEY

THE Botanical Society of Washington at its one hundred and third regular meeting, March 2, 1915, unanimously passed the following resolutions upon the death of Doctor Charles E. Bessey, dean and professor of botany at the University of Nebraska.

WHEREAS, In the recent death of Professor Charles E. Bessey, botany has lost one of its ablest investigators and teachers, one of the pioneers in