

it appears, was not because I had objected to a certain numerical statement about discord, but because I had referred to a curve by the late Professor Mayer which Mr. Meyer considers worthless. The work of Helmholtz in the same domain he also considers worthless. He quotes Melde and Stumpf, who differ with Mayer and Helmholtz. He concludes by saying "Upon the *cause* of discord the psychologists have *not* agreed; it is yet unknown—at least to the psychologists."

For many years I have been convinced that beats do not constitute the sole cause of discord, but that probably they constitute one efficient and important element. So far as this may be admitted, Mayer's curve is the nearest approach to an expression of facts within the range he selected. The present controversy seems to be chiefly regarding authorities. Criticism intended to be destructive is not a substitute for constructive evidence. The opinions of Melde and Stumpf are of course worthy of respect, but they do not prove Helmholtz and Mayer to be wholly wrong. It does not seem to me that the subject is of sufficient importance to call for further discussion.

W. LE CONTE STEVENS.

WASHINGTON AND LEE UNIVERSITY,
October 12, 1901.

THE BICENTENNIAL OF YALE UNIVERSITY.

THE program of the bicentennial exercises of Yale University being celebrated this week is as follows:

MONDAY, OCTOBER 20.

10:30 A. M.—Divine service in the Battell Chapel. Sermon by the Rev. Joseph Hopkins Twichell, A.M.

Special divine services in Center Church, sermon by the Rev. Newman Smyth, D.D.; in the United Church, sermon by the Rev. Joseph Anderson, D.D.; in Trinity Church, sermon by the Rev. Walton Wesley Battershall, D.D.; and in the First Methodist Church.

3:00 P. M.—Address by the Rev. Professor George Park Fisher, D.D., LL.D., on 'Yale in its Relation to Christian Theology and Missions'; Battell Chapel.

8:00 P. M.—Organ recital by Professors Samuel Simons Sanford, A.M., and Harry Benjamin Jepson.

SUNDAY, OCTOBER 21.

9:30 A. M.—Dedication of the Ives-Cheney Memorial Gateway.

10:30 A. M.—Address by Thomas Thacher on 'Yale in its Relation to Law'; Battell Chapel.

Address by Professor William Henry Welch, LL.D., on 'Yale in its Relation to Medicine'; Battell Chapel.

3:00 P. M.—Address of welcome to guests by President Arthur Twining Hadley, LL.D., with responses; Battell Chapel.

5:00 P. M.—Reception of the guests of the university and representatives of the alumni by President Hadley, in the Yale Art School.

8:00 P. M.—Assembly of students and graduates on the campus.

9:00 P. M.—Torchlight procession of students and graduates.

TUESDAY, OCTOBER 22.

10:30 A. M.—Address by President Cyrus Northrop, LL.D., on 'Yale in its Relation to the Development of the Country'; Battell Chapel.

Address by President Daniel Coit Gilman, LL.D., on 'Yale in its Relation to Science and Letters'; Battell Chapel.

2 P. M.—Football games at Yale Field; Yale University vs. Bates College; Yale University vs. team of graduates.

4:30 P. M.—Choral performance of Professor Horatio Parker's 'Hora Novissima,' by the Gounod Society and the New Haven Symphony Orchestra; Hyperion Theater.

8 P. M.—Illumination of the campus; student dramatic performance and singing in the campus amphitheater.

WEDNESDAY, OCTOBER 23.

(Commemoration Day.)

10 A. M.—Assembly of guests and graduates on the campus.

10:30 A. M.—Procession of guests and graduates to the Hyperion, as escort to President Roosevelt. Commemorative poem by Edmund Clarence Stedman, L.H.D., LL.D.

Commemorative address by David Josiah Brewer, LL.D.

Orchestral and choral music.

Greek festival hymn by Professor Thomas Dwight Goodell, Ph.D., the music by Professor Horatio Parker, A.M.

Conferring of honorary degrees on President Roosevelt and others.

2:30 P. M.—Concert by the Boston Symphony Orchestra, Mr. Wilhelm Gericke, conductor; Hyperion Theater.

4 P. M.—Dedication of Woodbridge Hall.

Address by Donald Grant Mitchell, LL.D.

5 P. M.—Farewell reception of the guests and graduates of the University by President Hadley and Mrs. Hadley, in the University Hall.

RESOLUTIONS ON THE RESIGNATION OF THE PRESIDENT OF COLUMBIA UNIVERSITY.

THE Council of Columbia University, representing the faculties, has adopted the following minute, on the occasion of the resignation of President Low :

When Mr. Low became the President of Columbia College, in the academic year 1889-90, the institution consisted of four faculties, in charge respectively of the schools of arts, mines, law and political science. These faculties numbered 122 officers of instruction ; and these schools were attended by 1,134 students. The faculties were connected with each other only through the president and trustees of the college ; and the schools existed alongside of each other without any principle or custom of reciprocity. The library of the college contained 91,000 volumes, and the wealth of the corporation was estimated at \$10,500,000. The faculties, schools, library and entire equipment were crowded into the narrow and noisy quarters bordering upon the tracks of the New York Central railway.

To-day Columbia University consists of nine faculties, in charge respectively of Columbia College, Barnard College, Teachers College and the university schools of law, medicine, applied science, pure science, philosophy and political science. These faculties now number 385 officers of instruction ; and these colleges and schools are now attended by 4,500 students. The faculties are now coordinated with each other in the University Council in which all of the educational activities and interests of the university are officially represented ; and a complete system of reciprocity between all parts of the institution and also with the Union Theological Seminary now prevails. The library of the university now contains 311,000 volumes ; and the wealth of the corporation is now estimated at eighteen millions of dollars, of which one and one half millions of dollars, in round numbers, represent the splendid generosity and munificence of Mr. Low himself. And, finally, the university is now located upon a site and possesses a physical equipment unsurpassed in beauty, comfort and completeness by those of any institution of learning in the world.

This magnificent achievement, wrought within the short period of twelve years, has no parallel in the educational history of any country or of any age ; and

no further or higher proofs of Mr. Low's abilities as an educator and an administrator than the mere recital of these facts are necessary.

But Mr. Low brought to the solution of the problems of the university qualities even more important and needful than these intellectual powers. First and highest among these qualities, and most indispensable, was the power to win and to hold the full and unwavering confidence and the cordial and zealous cooperation of all his colleagues, a power which can come only from an innate love of truth, joined with an open mind, a high sense of justice, unbending integrity, kindness of heart and genuine deference in manner. Every officer of the university felt that his interests and the interests of his department were safe in the hands of Mr. Low, and that no occult influences would ever be allowed to prevail in the administration of the affairs of the institution.

"It is the recollection of these rare and invaluable traits even more than of his administrative abilities which makes the parting with him so hard and regretful and which moves this Council to express the hope and wish for itself and for the bodies represented in it that from his seat in the Board of Trustees of the University Mr. Low may still continue to manifest his old interest in the development of the university and may still exert his great powers in the promotion of its welfare.

"Though conscious that these words do not express with any adequacy the feelings of the members of this body concerning the obligations of the university and all of its officers to Mr. Low and their deep regret at his retirement from the Presidency yet your committee would beg to recommend that the minute be spread in full upon the records of the University Council and that the Secretary be directed to transmit a copy of it with a suitable letter to Mr. Low."

THE CARNEGIE TECHNICAL SCHOOLS.

THE report of the committee of the Board of Trustees of the Carnegie institutions at Pittsburgh has been made public. It formally approves the scheme of the sub-committee and of the advisory committee of experts on the 'Plan and Scope' of the proposed Carnegie technical system of industrial education, as outlined by the latter in the report published in *SCIENCE* in July last and commented upon in the address of Mr. Brashear before his section of the American Association for the Advancement of Science, which appeared in our issue of September 13.

The committee recommends the organization