

evening primroses. The extensive studies which I have made on the pollen and spore conditions in the higher plants from the mosses upwards, which will be detailed and illustrated elsewhere, make the conclusion apparently unavoidable, that the Onagraceæ in general and the genus *Oenothera* in particular, are peculiarly subject to spontaneous hybridization in nature. It follows of course that no genus or group of plants could have been more unfortunately chosen to illustrate the origin of species by mutation or saltatory evolution. Obviously we must in the light of the considerations advanced above, interpret the variability of the seedlings of *Oenothera* species, particularly of those of *O. lamarckiana* of De Vries, as evidence of ancestral hybridization, on the evidence of the very significant pollen conditions revealed both by the genus under discussion and by many members of the family to which it belongs.

The mutation theory of De Vries appears accordingly to lag useless on the biological stage and may apparently be now relegated to the limbo of discarded hypotheses. The zeal, industry and insight of the distinguished plant physiologist of Amsterdam can not be too highly appreciated. Even although his hypothesis must apparently be given up both on morphological and genetical grounds, it has nevertheless been the cause of a great deal of valuable work, which will remain after the motive of it has disappeared. The present refutation has been undertaken in the interest of biological progress in this country. It is now high time, so far as the so-called mutation hypothesis, based on the conduct of the evening primrose in cultures, is concerned, that the younger generation of biologists should take heed lest the primrose path of dalliance lead them imperceptibly into the primrose path to the everlasting bonfire.

EDWARD C. JEFFREY

HARVARD UNIVERSITY

DEMOCRACY IN UNIVERSITY ADMINISTRATION¹

A DISCUSSION of the topic assigned to me in this conference might be as brief as the fam-

ous chapter on snakes in the Natural History of Iceland, or, to use a more modern instance, as a review of Mr. Taft's activities in subversion of the courts and the constitution. There is no democracy in university administration. But we can consider the conditions and the remedies.

The situation of a teacher has aspects inherently undemocratic. He has arbitrary authority over the conduct and intellectual life of his students, and is paid by superior officials to discipline and teach as they prescribe. The professor may lecture to his classes "als dictirt euch der heilig' Geist," and in other academic relations may realize that silence is silver and flattery gold. To be half tyrant and half slave does not strike the average of a free man. The pedagogue may be expert in his narrow field, while he is segregated from the larger life of his fellow men. His salary is safe and small; his clothes are black and threadbare; he is very respectable, but only half respected. The inevitable difficulties we emphasize by providing on the one side a system of education which does not carry its own appeal and must be enforced by examinations, grades, degrees, compulsory attendance and the like, while on the other side a system of administration has developed which puts the professor in a position of personal dependence. He is not only unfree in the sense of the domestic servant, whose wages, work, company, habits and Saturdays off are set by the employer, but he is also unfree in the sense of the slave in that he is held to his place by forces that he can not resist. This may be in part caricature, like the typical professor of the novel or play who hunts beetles, while his daughter or wife engages in flirtation, but a caricature may depict and enforce the truth.

A less obvious but equally undemocratic aspect of the academic career is due to the fact that the university professor earns his living by teaching and the conduct of academic routine, while society depends on him

¹Read at the conference on "The Relation of Higher Education to the Social Order," arranged by the council of the Religious Education Association, Yale University, March 5, 1914.

for productive scholarship and scientific research. Three quarters of the scholars and men of science in this country hold academic positions. Services to individuals can be paid for by those benefited, but we have no machinery in a democracy by which services to society are paid for by society. Public service can thus be rendered only by those who can spare the time, and is rewarded by recognition, reputation, honors, etc. Under aristocratic institutions men of inherited wealth may serve without salaries as members of parliament, magistrates, university chancellors, scientific men, scholars and the like, and may have their reward in social recognition, titles, membership in exclusive societies and similar non-rational sanctions. These by-products of oligarchy are its historical justification; responsibility for public service is placed on those who have wealth and privilege. But in a democracy power and wealth, in so far as they are desirable, should be the rewards of public service, not its prerequisites. Trustees of universities and members of school boards who serve without salaries are likely to render services about equal in value to the payment they receive.

Amateur work, whether by the man of wealth or by the teacher, becomes increasingly ineffective as the boundaries of knowledge are enlarged. The university instructor, impelled by sheer love, carries on a research, getting the time by working between hours and after hours. But he can not complete it or put it in its place in the orderly development of the science. He hopes to do so in the summer, but family bills accumulate, and he must engage in the sweat-shop labor of the summer school or some hack work. The research becomes cold, perhaps something of the same sort is done elsewhere, it is published in a slovenly way or not at all. I have somewhat recently had the privilege of visiting the Bureau of Standards, the Rockefeller Institute for Medical Research and the Research Laboratories of the General Electric Company. Here we have three institutions, conducted, respectively, by the government, under private endowment, and by an industrial concern, be-

side which the laboratories of physics, chemistry and physiology in our best universities are distinctly amateurish and inferior.

The men in these institutions have larger salaries and better facilities for their researches than are given in the universities; but their great advantage is that they are investigators by profession paid directly for the work they do. The professor, paid for his most important work in the fiat currency of reputation and petty honors, is in a position completely undemocratic. It is no wonder that we have the *demitasse* storms of academic politics and social life. There is one thing more absurd than for professors to march in processions in the order of their dignity advertising by brightly colored gowns and hoods the degrees they have received, and that is to make the financial reward of scientific and scholarly work transfer to an executive position which prevents doing such work thereafter.

The undemocratic aspects of our academic life are almost wantonly enhanced by the position attained by the president with the ensuing hierarchy of deans, heads of departments and other officials. The extraordinary material development of the country, with no balanced aristocratic system, has led to excessive power in the hands of a few individuals, whether in politics, in business, or in educational work. Every sensible person believes in individual initiative and individual responsibility. The safety in a multitude of counselors is usually due to the one who does the job. Government is a rough business, and this holds to a certain extent for educational institutions. The university or college president must do the best he can under hard conditions, and it is no wonder that he takes as much power as he can get. He has at least six masters—the trustees, the faculty, the students, the alumni, the general public and the bearers of the purse—not to speak of his wife's social and his own political ambitions. Each of them has different and discordant interests and ideals. It is not surprising that he finds it troublesome to ride these various horses and sometimes

. . . moves in a mysterious way
His wonders to perform.

The difficulty is that if an autocrat obtains unlimited powers, whether in the nation, the state, the city, the family or the university, he does not always prove to be wise and benevolent, and it may even be argued plausibly that the wise and benevolent despot is the worst kind, for he works the greatest demoralization. It is true that in a democracy we can afford to give large power to our leaders, for they are subject to the popular will. In the British democracy the monarch can only be permitted to be a social ornament, as he is there for life and his son after him. In our American democracy the president of the nation has extraordinary influence, but he can only maintain it so long as he reflects public sentiment. In Great Britain the cabinet is directly responsible to the parliament, and represents in its constitution the diverse elements of the majority, the prime minister not being necessarily the one most influential. This method is more democratic than ours, and in my opinion preferable. We have tried it with tolerable success in the commission form of government adopted by a number of cities. This is also at the present time being used in several colleges and universities, but not much can be expected here so long as it is a temporary expedient to last only until a president can be found.

It may indeed be seriously questioned whether the superior initiative and efficiency which one-man power is supposed to have is not more than counterbalanced in a university by the loss of these traits in the subordinates. A superman requires as his correlative many undermen. It is almost impossible to supervise the teaching and research of professors. Such an attempt is charmingly portrayed by President Maclaurin of the Massachusetts Institute of Technology in connection with the report on academic efficiency of the Carnegie Foundation:

The superintendent of buildings and grounds, or other competent authority, calls upon Mr. Newton:

Superintendent: Your theory of gravitation is

hanging fire unduly. The director insists upon a finished report, filed in his office by 9 A.M. Monday next; summarized on one page; typewritten and the main points underlined. Also a careful estimate of the cost of the research per student-hour.

Newton: But there is one difficulty that has been puzzling me for fourteen years, and I am not quite. . . .

Superintendent (with snap and vigor): Guess you had better overcome that difficulty by Monday morning or quit.

The sinister side of the president's control of the professor is shown in two cases which have recently become public property. At Wesleyan University the professor of political science and sociology was compelled to resign after some remarks on the observance of the Sabbath and, at Lafayette College, the professor of philosophy and psychology was dismissed because his teaching was thought not to be in accord with the stricter standards of the Presbyterian church. We are not here concerned with questions of academic freedom or of permanence of tenure, but only with the methods of determining what the professor may say and how he shall be dismissed. As a matter of fact, in these two cases the alleged infractions of orthodoxy were slight. Several clergymen have told me that they might very well have made the remarks of the Wesleyan professor, and the Lafayette professor remains a Presbyterian clergyman in good standing. At Wesleyan, the president asked for an explanation of the remarks of the professor, demanded his resignation and accepted it, the three letters being written on the same day without the possibility of official consultation with the faculty or trustees. The fact that in this case the alleged ground for the dismissal was not the real cause does not improve the situation. At Lafayette, in like manner, the president wrote to the professor demanding his resignation in view of the supposed contents of a course. In this instance the professor was given a hearing before the trustees, but the president was naturally upheld.

A distinguished army engineer has recently stated that he would not accept the commission of police for New York City unless

the law should be changed so that a policeman might be dismissed without the right of appeal to the courts. It is supposed to be a part of the moral etiquette of the New York police to commit perjury in defense of one another, and it may or may not be that arbitrary power would for a time be desirable. But an army officer has no such control over his subordinates, who can only be court-martialed after definite charges and trial. One result of the difference between the police system and the academic situation is that no one can question the personal courage of the police. Whether it is better to lie like a policeman or to run to cover like a rabbit need not be argued, as it would doubtless be agreed that conditions should be such that this is not the necessary alternative. The slur about the third sex in America is unwarranted, but it would be better if there were not enough smoke to give rise to the alarm of fire.

Professors in the better institutions are not often dismissed because they or their views are not in favor with the administration, though this happens much more frequently than it becomes known, for the professor is naturally disinclined to drag the "pageant of his bleeding heart" across the continent and have his name put on the employer's black list. But it is this publicity which is his safeguard; and we have exercised by the body of professors and the general public a real democratic control, to which the president and trustees must submit. Stanford University has not recovered in thirteen years, and will not recover in another generation, from the loss of prestige due to the dismissal of Professor Ross and its sequelæ. Departments of economics and sociology in leading universities would not recommend a successor to Professor Fischer at Wesleyan, and public spirited men would not accept the position. At Lafayette, the resignation of the president has followed promptly the publication of the report of the American Philosophical and Psychological Associations on the dismissal of Professor Mecklin. On the other hand, Harvard maintained its high position by promptly

offering lectureships to Professor Ross and Professor Fischer.

But while professors are not often dismissed because the president does not like their teaching or their personality, the possibility is present every day with a resulting demoralization not easy to estimate. Even more serious is the fact that the president may be responsible for the appointment and promotion of instructors and professors, and for increases in salary—for salaries are sometimes increased, however remote this contingency may seem to most professors. Semi-secret increases in salary by favor of the president must be regarded as intolerable. It tends to divide those who suffer under it into three classes—courtiers, quietists and rebels. The courtiers are those most likely to flourish in the system to its ultimate collapse.

I have had the privilege of proposing and seeing adopted by the trustees of Columbia University a change in the statutes in the direction of social democracy. We had long had, like some other institutions, provision for a sabbatical leave of absence on half salary. But in practise it proved that the sabbatical year was usually claimed only by those professors who had independent means or no family; it was thus a case of class privilege. Five years ago the statutes were altered to allow the alternative of a half-year leave of absence on full salary. This gives the professor some eight months for travel and research without loss of salary, and the institution sacrifices no more than on the half-salary basis, except in so far as more professors benefit. The plan deserves adoption in other institutions, and may properly be mentioned in a paper concerned with democracy in the university. It also gives opportunity for the frivolous remark that it might be an advantage if the statutes of a university provided for leave of absence of the president so often as he liked on double salary.

We do not know whether the progress of civilization has in the main been due to great men who have directed it, or whether these are essentially by-products and epiphenomena of social and economic forces. It is, therefore,

no wonder if we can not decide categorically whether or not it is well to have in the university one leader whom the rest of us will follow. But it is probably undesirable, as it is certainly undemocratic, to have a boss who drives us. This is the fundamental difficulty in our present university organization. The president is responsible to the trustees who in the private corporations are responsible to no one. The deans and heads of departments are responsible to the president who names them, and their subordinates are responsible to them. This department-store system reverses the correct or, at all events, the democratic direction of responsibility. The department or group should name its head and those to be added to it. The teachers or professors should name their deans and their president who should be responsible to them. The trustees should be trustees, not regents or directors. Their relations should be with representatives of the faculties, not exclusively with a president whom they appoint and who in practice is likely to select them.

It may be that the high-tide of presidential autocracy in our universities is now ebbing. At any rate we are discussing the problem more freely than in the past. I have obtained and published opinions of some three hundred professors who have done scientific work of distinction. These exhibit a very wide-spread dissatisfaction with the existing system. There is naturally much difference of opinion as to the remedies, but five sixths of them favor reforms in the direction of greater faculty control and less presidential autocracy. The remaining one sixth are mostly executive officers or men in institutions where the faculties have more than average influence. Thus the great university now entertaining this conference has maintained the better traditions. It has been said that if the faculties name the professors, there will be inbreeding and deterioration. To this it may be replied that Yale is represented in the National Academy of Sciences by eleven members; Cornell and Pennsylvania, with twice as many students, each by one member.

Harvard, like Yale, has maintained a meas-

ure of faculty and alumni control. President Eliot, whose masterful personality has been influential in exalting the presidential office, has at home deferred more to the corporation and overseers on the one side and the faculty on the other than lesser presidents. The plan adopted at Harvard of promotion after a fixed term of service with uniform increments of salary and permanence of tenure for the full professor removes him from the most humiliating relation to the president. At Cornell the faculties have been granted the right to elect their deans, and President Schurman advocates faculty representation on the board of trustees. At Princeton the departments have been authorized to recommend appointments and promotions, and a committee elected by the faculties meets with a committee of the trustees, this latter plan being in my opinion the most feasible method of improving the academic situation. Other reforms at various institutions in the direction of greater faculty control might be cited, the most striking and recent being the referendum vote of confidence obtained from the faculties by the president of the University of Illinois.

Whoever or whatever may be the occasion of reforms in academic control, the real cause must be the sentiment of the professors, and this can only be developed and expressed by proper organization. I am proud to belong to an association that at two consecutive meetings has taken action exhibiting a group consciousness of this kind. A year ago the American Psychological Association unanimously passed a resolution proposed by me to the effect that it is undesirable for its members to accept work in summer-schools or extension courses in which the pro rata payment is less than their regular salaries. Last Christmas at New Haven the association took the action to which reference has been made on the dismissal of the professor of philosophy and psychology from Lafayette College. An influential committee of one hundred on research has been formed by the American Association for the Advancement of Science. It may be that the time has now come when an association of American university professors might be or-

ganized, similar to the medical and bar associations, which would be an influential force in improving the conditions under which our work is done. It should not be forgotten that the maintenance of high standards in the university is as important for the community as for the professor, and his efforts on its behalf are by no means narrowly selfish. The future of the American university does not depend upon its machinery, but upon its men. The danger of a bad system is that it may gradually demoralize the spirit and ideals of the men working under it, and may keep from it or drive from it the kind of men who are needed.

When a speaker has only twenty minutes in which "to set the crooked straight," he can not be expected to devote much time to explaining that it is not so very crooked and is made of sound timber. The university is the noblest monument which we have inherited from the past and at the same time the most powerful engine driving forward our civilization. We owe to it the tribute of truth and the duty of service. It is our part to make it a democracy of scholars serving the larger democracy to which it belongs.

J. McKEEN CATTELL

CALVIN MILTON WOODWARD

CALVIN MILTON WOODWARD was born in Fitchburg, Mass., on August 25, 1837. He was graduated from Harvard in 1860 with the degree of A.B. and with the honor of membership in Phi Beta Kappa. In 1905 Washington University, and in 1908 the University of Wisconsin, conferred upon him the degree of LL.D.

During 1860-65 he was principal of the Newburyport, Mass., high school. In 1862 he was granted leave of absence for one year. During this period he served first as lieutenant and then as captain of a company in the 48th Massachusetts Volunteers. His regiment helped patrol the Mississippi in Louisiana and was under fire in the siege and storming of Port Hudson.

In 1865 he came to St. Louis, where in the service of Washington University and of his

adopted city and state he passed the last forty-nine years of an active, energetic and fruitful career. At first he was the vice-principal of the academic department. In 1866 he was doing college work and was principal of the O'Fallon Polytechnic Institute. In 1868, under the authority of the university corporation, he began the organization of an engineering department. In 1870 he was made Thayer professor of mathematics and applied mechanics, and dean of the polytechnic faculty. In 1880 the St. Louis Manual Training School was opened, with Dean Woodward, its organizer, as director, and immediately it became the educational novelty of St. Louis, and for that matter, of America.

From this time, with some minor changes, he held until 1896 the positions of Thayer professor of mathematics and applied mechanics, dean of the engineering school and director of the manual training school. He resigned the deanship in 1896, but resumed the duties of that office in 1901 and again from that time carried his threefold official title until his final retirement from active service in the summer of 1910. He had remained in the harness until the close of his seventy-third year, when he retired upon the Carnegie Foundation. "His eye was not dim and" apparently, "his natural force was not abated." Four more happy years came to him in literary work, on educational boards and in the free use of his time and talent in the lecture field. On January 10, just passed, he was actively at work in behalf of a philanthropic enterprise which had deeply interested him for two or three years when the cerebral lesion attacked him which on January 6 proved fatal. After a private funeral service at the house, January 12, there was held at the church of which Dr. Woodward was an active member a memorial service at which Dr. Dodson, his pastor, Mr. Langsdorf, his pupil and colleague, as well as his successor as dean, Mr. W. A. Layman, president of the Wagner Electric Company, and Mr. Ben. Blewett, city superintendent of public instruction, spoke of his services to society, to the university, to mod-