

tivity of the yeast cell or its zymase is greatly accelerated by the presence of these substances. The question then may properly be asked whether soluble phosphates do or do not accelerate the activity of the organisms or the enzymes responsible for those important soil processes mentioned above, and further whether sulphates effect in the same degree such accelerations.

Work in this and other laboratories has progressed far enough to indicate that soluble phosphates have a very material effect in increasing the number and consequently the rate of ammonification, nitrification, nitrogen fixation, and carbon dioxide output of those soil organisms capable of carrying out these processes, while sulphates do not, at least in the same degree, accelerate their multiplication. My thanks are due Professor C. Hoffmann for conducting such experiments.

From such results it is evident that sulphates will not be of the same importance in increasing crop production as can be expected from the phosphates. An adequate supply of sulphates is, of course, necessary, and for those crops making an abundant use of sulphur, such as the high protein plants and the members of the Cruciferae, a further concentration in sulphates of the soil water may often result in increased crop production. But to the phosphates must be ascribed functions additional to that of merely maintaining a certain concentration of phosphorus in the soil solution—namely, the important function of greatly accelerating the biological activities of the soil.

In conclusion, however, it should be emphasized that as crop production per unit of area increases through the extended use of added phosphorus and attention to proper soil reaction, there will result an increased demand for sulphur.

E. B. HART

UNIVERSITY OF WISCONSIN

GRIZZLY BEARS: SKULLS WANTED

HALF a century ago a considerable number of wholly distinct species of grizzly bears inhabited the western part of North America. They ranged from the eastern edge of the

Great Plains in Manitoba and the Dakotas westerly to the Pacific coast in British Columbia and California, and from the shores of the Arctic ocean south into Mexico. The species inhabiting Alaska and the western provinces of Canada, though reduced in numbers, may still be counted among the living, but those of the western United States are with few exceptions extinct; and what is still worse, in most cases only a few skulls remain to afford future students a fragmentary and imperfect picture of the great carnivores which not long ago were dominant figures in our wild life.

For twenty-three years I have been engaged in a study of the bears, and have been favored with specimens (mainly skulls) from nearly all the museums and private collections of the United States and Canada. Still, owing to wide gaps in this material, many questions have arisen which can not be answered. Not only is it impossible to map the ranges of the different species with anything like precision, but in some cases, owing to the absence of skulls of adult males, the characters which serve to distinguish one species from another can be determined only in part.

Therefore, in the hope of obtaining more light on some of these questions before going to press, I wish to make a final appeal to all who have skulls of grizzlies in their possession. I am anxious to see as many skulls as possible of both sexes from all parts of the western United States, British Columbia, Alberta, Manitoba, Yukon Territory and Alaska, and would like to purchase or borrow all that I have not already seen. Owners of skulls will confer a favor by addressing

C. HART MERRIAM

NATIONAL MUSEUM,
WASHINGTON, D. C.

QUOTATIONS

THE PARTICIPATION OF UNIVERSITY PROFESSORS
IN POLITICS¹

My dear President McVey: I regret to advise you that I find myself out of harmony

¹ Correspondence between the professor of law and the president of the University of North Dakota.

with the university administration on the question of academic freedom, which I regard as fundamental; and I therefore tender my resignation as professor of law, to become effective at the end of the present academic year, that is to say, in June, 1914.

When I joined the faculty here a year ago last September, it never occurred to me that restraints would be imposed upon my freedom of action in public affairs. Indeed, it was represented that public life presented an attractive avenue to the professor in North Dakota.

Last year I made several speeches during the presidential campaign and induced two of my colleagues to do likewise. After the election, much to my surprise and chagrin, you objected to what we had done. In the interview that you granted my associates and myself, you first took the position that members of the faculty must not take part in national and state politics, although they might participate in municipal politics. I suggested that my resignation was ready, if you spoke advisedly. You asked me not to resign. The interview was terminated with the understanding that you personally were opposed to professors having anything to do with politics, except municipal, but left it to each man to determine his own course.

In October of the present year, at the request of the local leaders, I attended a statewide Progressive conference at Fargo. The gathering was informal, not open to the public, and for purpose of organization. A few days after the meeting, I was advised by the dean of the law school that you had told him that Judge Young, one of the university trustees, had objected to my participation in the conference, taking the position that members of the faculty must keep out of politics, on penalty of dismissal. I was further informed that his position represented the policy of the administration and this has since been confirmed.

It scarcely is necessary for me to observe that I regard such a policy unjust to the faculty and the institution; and I am satisfied that a professor could not legally be removed for exercising the prerogative of citizenship.

Under the circumstances, if I were to remain here, I should be compelled either to engage in an unseemly and distasteful wrangle with the administration or to sacrifice the rights and be recreant to the duties of citizenship. Neither course commends itself to me.

In my humble judgment, it will be a sorry day for American education, if the policy of suppression adopted here ever becomes general. One can not, it seems to me, reach his full development, either as a teacher, a citizen or a man, unless he retains normal relations with life. Without this a university professor, no matter how strong his intellect or profound his learning, must become—like the image of Nebuchadnezzar—possessed of a gold head, but feet of clay.

As a last word, may I say that my disposition toward you personally is cordial, and I do not hold you responsible for the policy with which I take issue so squarely. I respect your scholarship and your talent as an administrator, and trust that our relations may remain friendly. All of which is respectfully submitted.

Sincerely yours,

JOSEPH L. LEWINSOHN

My dear Professor Lewinsohn: I have your letter in which you indicate your intention of resigning at the end of the year. I shall present the resignation to the board of trustees at their next meeting for their action. I respect your point of view, though I do not agree with it, and wish you to understand that there is no personal feeling in the matter, so far as I am concerned, and that our relations will remain cordial.

I wish, however, to say that in my opinion you are wrong. We have been insisting for some time the judges of the court shall remain out of politics and have put them upon non-partisan tickets, and it is no longer good form for a judge to take the stump in a political election. To my mind, a professor in a state university occupies much the same position, with even more emphasis upon the necessity of his remaining in a judicial position than in the case of a judge of the state court. I do not want my boy taught political economy, for instance, with a Democratic or Republican

bias, and just as soon as I enter politics I begin to act as a partisan and I lose my place as a judge and an unbiased individual. As soon as a professor enters politics he makes the university an object of political purpose. This is so for the reason that the political activity may be utilized and places gained through political control.

As politics go, you can not escape their consequences, and to develop a theory about academic freedom that you can escape them, and still take part in them, is entirely beside the mark. There is no restriction placed upon the teaching of a professor, or upon his speaking upon social and economic questions, but as soon as he allies himself with a political body which seeks to control the political power of the state, there is danger. The life of the universities in this state and elsewhere depends upon their being able to keep above this kind of politics, the kind that you want to engage in. Professor Ross, of the University of Wisconsin, put it in this way: "We (meaning professors) ought to be willing to give over the forum to the politicians for a period of six weeks, when we have it all the rest of the year."

I do not acquiesce at all in your view that the educational life of the universities and of the state is endangered by this attitude. To my mind, it is good sense and good policy.

With best wishes for your success, I remain,

Yours very truly,

FRANK L. McVEY,

President

SCIENTIFIC BOOKS

Objektive Psychologie. By W. VON BECHTEREW.

Authorized translation. Leipzig and Berlin: Teubner. 1913. Pp. viii + 468. 16 Mks. unbound, 18 Mks. bound.

The study of animal behavior is developing a tendency among certain psychologists to emphasize motor expression as a research method in human psychology. Professor Max Meyer's "Laws of Human Behavior" is typical of this trend, though it shows the influence of traditional psychology in many respects. Other American writers are leaning

in the same direction, and Professor J. B. Watson has recently thrown down the gauntlet by proclaiming boldly that behavior is the one fruitful method of psychological investigation, and that the study of consciousness is unscientific and barren.

In his "Objective Psychology" Professor Bechterew attempts a systematic development of psychology according to the behavior method. He does not expressly reject introspective psychology, but proposes to eliminate it from the present work. Starting with the concept of the neuropsychic reflex he aims to describe the whole mental life of man in terms of expression, discarding entirely conscious phenomena, such as sensation, feeling and thought. He calls this science objective psychology or psychoreflexology. A better English equivalent is behaviorism or behavior psychology. Considering the newness of the field, Bechterew's attempt is fairly successful. He has outlined systematically and with remarkable completeness the various aspects of human mental life as they are manifested in every sort of objective expression.

A distinction is made at the outset between purely nervous processes and neuropsychic processes. The former depend solely on present stimuli and inherited nervous mechanisms; the latter are modified by past individual experience (pp. 16, 22, 24). Every impression "leaves in the nerve centers a certain trace which under certain circumstances can be re-experienced and thereupon appears as an associative or psychic reflex" (105). Impressions or stimuli are classed as external (that is, from peripheral sense organs) and internal (organic, etc.); the resulting expressions are either movements, vasomotor activity, or secretion (164). Responses to external stimuli are termed reflexes, those due to internal stimulation are called automatic movements (165), though the distinction is not always sharply marked (166).

Reactions of every type have become organized into complex "acts" by means of special nervous mechanisms aided by the traces of former impressions. Thus an external stimulus may give rise to a complex act such as