mine precisely what effects will follow their prolonged administration. But experiments on animals involving the daily and prolonged administration of small quantities of *each* of the several higher alcohols which are found to exist in traces in distilled liquors are not as numerous as could be desired.

Again in speaking of alcohol as a respiratory stimulant, p. 116, it is stated that highly flavored wines, brandy and other alcoholic beverages which contain larger amounts of stimulating esters have a more pronounced action than ethyl alcohol and in numerous passages elsewhere throughout the book it will be found that the pharmacological action of ethyl alcohol is contrasted with that of the by-products of alcoholic beverages. On p. 10 may be read: "In 'pure' wines the various ethers and aldehydes constituting the 'bouquet,' the degree of acidity, the amount of sugar and salts, are of importance, both from a medical and from a hygienic point of view."

A report which aims to show that ethyl alcohol is the chief deleterious agent of alcoholic beverages and the one mainly responsible for the evils of intemperance should not be so quoted that one could infer that it was there stated or implied that the effects of all such beverages on all living things (including rotifers) is to be measured only by their alcoholic content.

JOHN J. ABEL

Baltimore, April 19, 1911

THE APPOINTMENT, PROMOTION AND REMOVAL OF OFFICERS OF INSTRUCTION

The address by President Van Hise, "The Appointment and Tenure of University Professors," which was printed in Science on February 17, 1911, is interesting in many ways. It shows, in the first place, the prevalence of a strong feeling that there is something unsatisfactory about the way in which the power of appointment and removal is exercised in our universities, and, in the second place, it is noticeable for a tacit acceptance of the common assumption that any objection to the way in which a public trust is admin-

istered implies a demand for a change in the machinery by which its administration is effected, and does not, as might more naturally be thought, perhaps only exhibit a desire to see the power that directs the machinery made more intelligent. If our cities are badly governed by mayors and councils, the remedy is sought in government by commission or in some other purely mechanical attempt to change the locus of power, instead of in the more laborious and less outwardly promising task of purifying it of selfishness and ignorance; and President Van Hise seems to deal with the question of university government from a similar point of view, although, to be sure, he does so for the most part negatively and by inference rather than positively and directly. He is undoubtedly right in his contention that the president is the proper officer to be entrusted with the power of appointment and removal; although many will question his implication that the president's right to this power rests on the fact that he makes wise and courageous use of it. He is also right in insisting that removals are necessary when efficiency or usefulness are destroyed by physical, mental or moral weakness; and he is justified in attributing some (but not all) of the opposition of faculties to the presidental power of appointment and removal to their selfish desire for permanent sinecures; but his address implies an attitude on some other points to which exception may be taken.

For one thing, he is too sanguine; for he assumes two things that there is considerable reason to doubt. He seems to think, first, that the acts of governing boards of universities are always in the interests of the students and the public; and, second, that public condemnation is visited swiftly and certainly on all college presidents who employ the power of removal with even a suggestion of unreasonableness or injustice. That these two assumptions are justified may fairly be called into question.

One of the greatest weaknesses of American universities, according to an opinion of wide prevalence, is their governing boards. These

bodies, composed for the most part of men without anything but the most superficial knowledge of educational practise, often without liberalizing experiences or any real intellectual training, may afford avenues of approach to funds available for the support of educational activities; but they can take no constructive part in educational work, and therefore their action is most intelligent when it is purely perfunctory; as, fortunately, it is for the most part. This is a very general estimate of the worth of governing boards, and there is evidence to bear out its correctness in President Van Hise's address. He says that governing boards merely consider the question of finances in establishing new chairs; so, we may suppose, that if any faculty should so far forget itself as to imagine that a chair of mendacity was necessary, the average governing board would merely count up its cash and determine by that action alone whether to establish it or not. Of course it will be objected that this is a flippant and incomplete way of stating the situation, and that governing boards limit their direct responsibilities to financial matters, leaving all questions of instruction to the sole decision of the faculty. This answer is unconvincing, however, because it is impossible to consider the financial and the intellectual sides of such questions separately, and because it is not fair that the faculty should have only responsibility and no authority in such matters. The fact that there is a strong feeling that governing boards have much power that they do not use intelligently, and that they exercise much authority without being willing to accept a corresponding degree of responsibility, is probably a stronger reason than the one given by President Van Hise for faculty objection to the interference of outside bodies in the matter of teaching appointments. The remedy for this condition, however, does not lie in changing the functions of the officers who interfere or in abolishing them, but in changing their character so that their action on such matters shall be intelligent. If university governing boards were selected with more discrimination than they are at present, and were therefore able to give

intelligent consideration to all the larger questions that confront their institutions, many other problems besides those in connection with the appointment and removal of officers of instruction would be solved, and complaints of appointments due to favoritism and expediency or of flagrantly unjust removals could be dismissed as the cry of irritated incompetence—something that can not be done with many that are now made.

It would be pleasant to be able to believe that the public is sure to reprehend any abuse of the power of appointment or removal, but any one who is familiar with the way in which that power has been exercised in many of our universities will have some difficulty in doing so. The public is likely to take an interest in the case of a man whose removal can be attributed to his political or religious opinions; but where only intellectual fitness and teaching efficiency are involved it shows little interest, unless by some accident the case becomes exploited sensationally. It is very much as it is with the exercise of political power. On certain irregular occasions there is great excitement over the appointment of an incompetent or the removal of an efficient public officer, but as a general thing it is taken as a matter of course that such acts shall be unintelligent and inspired by selfishness oftener than a sense of duty. In Science for August 19, 1910, Professor A. W. Crawford, of Manitoba University, has a letter calling attention to the fact that the University of Pittsburgh, by faculty changes that involved the removal of two professors, effected a saving of \$2,000 a year, but that \$1,500 of it was added to the salary of the executive officer who made the removals. If the facts are as stated, it would seem that the University of Pittsburgh would be an especially good place to establish a school of politics, as the performance would do credit to some of our most abused municipal governments. The public, however, does not seem to have been at all disturbed by it, in spite of the fact that a reform wave struck Pittsburgh about the time it was done and several councilmen were indicted.

Another illustration of the way the public takes removals can be found in the case of Brown University. A dozen years ago the removal of a man from this institution stirred the whole country. The man, however, was the president of the university; he had guided it during the period of its greatest development; was, perhaps, its most distinguished living alumnus; and he was removed for holding opinions that were an issue in national politics at the time. Ever since that time, according to common report, the power of removal has been invoked in the same institution with great frequency against less conspicuous men. Repeated complaints have been raised of men having been cajoled, crowded or thrust out of the Brown faculty with varying degrees of suddenness and consideration. In some cases the men so treated had served the university for many years without being found incompetent or even unworthy of regular promotion—something which in most institutions is regarded as establishing a claim that prevents removal on the ground of natural unfitness. In other cases, whatever the justification for removal, the action was accomplished in a way to rob it of all appearance of tact and dignified decision; and yet the public has shown no disposition to visit reprehension on the institution; although, according to President Van Hise, it would be sure to do so under circumstances far less capable of being interpreted as indicating unwise or unjust action.

The fact that removals are sometimes necessary does not justify the inference, as President Van Hise implies it does, that every removal made is a just and wise one. It is because faculties feel that many are both unwise and unjust that there is so much complaint against the power that makes them; and it is the fact that there is some warrant for this feeling that gives these complaints their force. Even if all removals were justified, however, President Van Hise's address shows that executive officers would not be free from all blame in connection with them. He states that the college president usually ap-

proves without question all nominations for minor appointments, and that only in the case of promotions or appointments to positions of professorial grade does he give the matter any personal attention. He might have added, had it lain within the scope of his paper, that many universities exploit their minor appointments in various ways, and by so doing attract many men into teaching who later on have to be removed. It must be admitted that some probation is necessary before the fitness or unfitness of a teacher can be determined, and it may be that a college president's time has too many demands on it to permit him to consider every minor appointment. It requires, however, something else besides experience to make a teacher, for some mental equipment and training is necessary on which to superimpose that experience; and it lies within the power of college presidents to insist on the possession of this equipment and this training. It is also within the power of college presidents to stop the practise of appointing men to minor teaching positions for no better reason than the fact that they will swell the number of graduate students. As to whether a president can reasonably be expected to have time to devote to considering minor appointments, it can only be said that if he has not, it might be well to create officers to relieve him of some of his duties and enable him to do so. travelling press agent might serve the purpose. Such an officer could relieve the president of the junketing and of the task of conducting the enthusiasm campaigns that are now deemed necessary to keep a university prominent in the race for numbers and notoriety, and the president could be left free to devote himself to more purely intellectual matters. It might even be found that the press agent was unnecessary, and that if college presidents devoted themselves more to their natural responsibilities, the gain in efficiency might prove to be a far more effective advertisement than the most ingenious press agent could ever devise or the most energetic one ever carry out.

But if it is not possible to agree with Presi-

dent Van Hise that college presidents should be entrusted with the power of appointment and removal because they invariably use it in the interests of efficiency and justice, it is possible to believe so for other reasons. In the first place, if the president makes the appointments responsibility can be brought home to an individual; whereas, if the faculty made them, it would be distributed among a body of men, and individuals could evade it. Then the president ought to be better able to perceive the needs of the whole institution than the faculty; for the views of faculty members are sure to be narrowed by an inevitable tendency to give undue importance to their own and allied subjects. A still more important reason for the president's making the appointments, however, is the fact that he is not like members of the faculty influenced by a fear of competition. It is natural that professors on whom the task of recommending appointments falls should prefer docile mediocrity to men of ability sufficient to develop into rivals for the positions they hold. Intellectual men are proverbially jealous, and the keenness with which they scent rivalry is remarkable; so it is not to be wondered at that promising men find the gateway to teaching closely guarded against their entrance, and that those who succeed in slipping by soon find their path so obstructed that many of them retire in disgust. This is something for the president to correct. His penetration should be sufficient to detect this practise; his courage, decision and dignity sufficient to suppress it and to replace it by a spirit of earnest emulation between teachers of the same as well as different subjects. Unfortunately college presidents do not seem now to be selected because they possess inspiring moral and intellectual qualities, but, one is often tempted to believe, because they can clothe popular fallacies and meaningless commonplaces in language of seeming profundity, or because they are skilful in a sort of emasculated machiavellism. When the public learns to take its responsibilities to education more seriously, we shall have college governing boards and college presidents who discharge their duties more intelligently, and this in turn will ensure faculties of higher effectiveness; so that the whole machinery will acquire a nicety of adjustment that will enable its various parts to work together without the friction that takes place between them now.

It would seem, then, that President Van Hise is right in saying that the present machinery of education needs no external modifications, but it is impossible to accept his implication that educational results are satisfactory. As a matter of fact, present results are very poor, not only in the matter of appointments and removals, but in a general way as well. The only way to improve them, however, is to render the real guiding power of education—public opinion—more intelligent.

SIDNEY GUNN

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, March 3, 1911

## SCIENTIFIC BOOKS

A NEW TRANSLATION OF ARISTOTLE'S "HISTORY OF ANIMALS" 1

"THE History of Animals," by Aristotle, much as it is referred to by naturalists as well as others, has never appeared until lately in a fitting English dress. At last a translation has been published from the pen of a scholar who combines, to an eminent degree, the principal qualifications necessary for such an undertaking—an adequate knowledge of the Greek language and acquaintance with the Grecian fauna. D'Arcy Wentworth Thompson, professor of natural history in University College, Dundee, is the man to whom we are indebted for the new work. It "has been compiled at various times and at long intervals during very many years" and was so long delayed that we had almost despaired of see-

<sup>1</sup> The works of Aristotle translated into English under the editorship of J. A. Smith, M.A. [etc.], and W. D. Ross, M.A. [etc.], Vol. IV., Historia Animalium by D'Arcy Wentworth Thompson, Oxford, at the Clarendon Press, 1910. 8vo, pp. xv + 486°-633° + 151.—\$3.40.