

AFTER due consideration of a number of proposals for the alteration of the British system of weights and measures, such as the compulsory adoption of the metric system and the decimalization of the existing weights and measures, the British trade committee has decided against any compulsory changes at the present juncture, but recommends a continuation of the efforts toward simplification in the teaching of weights and measures and the use of decimal subdivision of basic weights, such as the cental of 100 pounds instead of the hundredweight (112 pounds) and the short ton of 2,000 pounds. The committee recognizes the value of the proposal for the decimalization of the sovereign, which would be divided into 1,000 mils, the mil being worth 4 per cent. less than the farthing. It believes, however, that considering "the magnitude of the disturbance which the alteration in the value of the penny would cause in the lives of the great body of wage earners, retail shopkeepers and their customers . . . the introduction of such a change would be inexpedient at a time when the social, industrial and financial organization of the country will be faced with numerous and exceptional difficulties."

THE second reading of the British Coinage (Decimal System) Bill was moved by Lord Southwark in the House of Lords on June 4. Lord Leverhulme opposed the motion, though he was not against the principle of decimal coinage. He objected to making the sovereign the unit and dividing it into one thousand parts, and he thought that a British decimal system of coinage should be based upon the halfpenny. After discussion, the debate was adjourned on the understanding that the government will institute an inquiry into the whole question of decimal coinage, including the proposals contained in Lord Southwark's bill.

THE Bureau of Mines announces the perfection of a type of electric melting furnace that may be revolutionary in the making of brass. Patents on this furnace, known as the rocking electric furnace, have been taken out by the bureau and have been assigned to Secretary Lane as trustee. Free licenses to op-

rate these furnaces under the patents, it is understood, can be obtained by making application through Van. H. Manning, director of the Bureau of Mines. The new furnace, which it is claimed will reduce the important losses in brass melting, is the result of five years' experimentation by H. W. Gillett, chemist of the Bureau of Mines, in cooperation with the laboratory of Cornell University, the American Institute of Metals, and a number of manufacturers of brass.

UNIVERSITY AND EDUCATIONAL NEWS

By the will of the late Lord Rhondda the governing body of Gonville and Caius College, Cambridge, will receive out of the residue of his estate the sum of £20,000, to be applied at its discretion for the benefit of the college, but preferably in the establishment and maintenance of six to ten scholarships tenable at the college for mathematics, natural science, or moral science (including economics), preference being given, *ceteris paribus*, in the awarding of such scholarships to residents or sons of residents in Wales or Monmouthshire.

A. H. BENTON, assistant professor of farm management, at the University of Minnesota, has accepted a position as professor and chief of the division of farm management and rural economics at the Manitoba Agricultural College.

A. B. COBLE, associate professor of mathematics in Johns Hopkins University, has accepted a professorship of mathematics in the University of Illinois to begin work in September.

DR. AVEN NELSON has been appointed president of the University of Wyoming.

DISCUSSION AND CORRESPONDENCE PSEUDO-PSYCHOLOGY

TO THE EDITOR OF SCIENCE: Through no fault of their own, not a few instructors of elementary psychology to my knowledge spend many an arduous hour trying to indicate to indiscriminating minds both what psychology

is not and what is not psychology. Press reporters, magazine writers, novelists, dramatists, preachers, popular lecturers, and advertising experts, are responsible for much psychological heresy that is so deeply rooted in the lay mind. But equally pernicious is the influence of teachers, yes, even academic colleagues in other disciplines, who, though their tutelage in psychology dates back to a previous generation, flaunt their opinions on the subject as if antiquity of the vintage were a guarantee of acceptability of the doctrine. Coupled with these agencies for the propagation of malefic and subversive statements is the human, almost inhuman, tendency to conjure with words and phrases that are suggestive of possibility but, among those so using them, not redolent with meaning or precise in definition. Thus have "psychology" and "psychological" suffered immensely. For what member of an English-speaking community can fail to be impressed, if not inspired, by the sound of the expression, "the psychological moment"! What greater distinction can be accorded an insignificant alienist in court than to whisper with bated breath or to state in bold type that he is a famous "psychologist"! It has been said that officers in camp frequently explain the inexplicable in similar terms. Indeed, a current committee of the American Psychological Association has found it necessary to indicate restricted usages of the term "psychological" even among professional psychologists. But to my mind the most insidious of all baleful influences are to be found in connection with such commercialized undertakings as impose upon the ignorance of the general public to the extent of taking advantage of its credulity. Whether the intention of doing this is present or absent, is difficult of proof and, moreover, not to the point: the effect is the same.

The week's mail brought to my notice an attractively printed pamphlet describing the aims and scope of an incorporated "National Psychological Institute." Hence the occasion for these remarks. The individual whose name appears on the title page is the medical adviser and a trustee of the institute. His credentials

indicate that he is a member of several medical societies, fellow of the American Medical Association, member of the American Association for the Advancement of Science, and of the National Geographic Society. No affiliation with any psychological association is mentioned. The institute "was organized in the firm realization that the Science of Life and an intelligent appreciation of the relationship between the visible and the invisible world, constitutes not only the highest form of religion but also falls within the domain of scientific endeavor" and for the purpose of carrying on "experimental research in normal and abnormal psychology and demonology . . . , to develop and instruct psychic-sensitives, as intermediaries in above stated experimental research, and grant certificates to same when proficient," etc. "Despairing mortals, on the brink of a suicide's grave, are especially urged to communicate (strictly confidentially) with the institute for advice regarding so serious a step." We are told that "research in abnormal psychology has unmistakably demonstrated that ignorant or mischievous discarnated human entities do frequently play a serious rôle in all manner of functional mental aberrations and insanity, the ravages of which, according to eminent authorities, are threatening the very social fabric." More specifically the symptomatology of shell shock "suggests obsession or possession by spirits of dead soldiers . . . as the exciting cause."

These quotations and other uncited but similar statements speak for themselves. It is not my purpose to decry earnest endeavor to gain knowledge in fields in which its pursuit has not so far been very fruitful. For many years, as my students can no doubt abundantly testify, my attitude toward psychic research has been respectfully sympathetic. In my reviews of publications on the subject, moreover, I have been no more critical than are the foremost investigators in this field. Nor do I intend to charge this institution with an attempt to defraud the public for financial gain. Representations in the pamphlet indicate that the organization is benevolent and humanitarian in character and not established for profit.

What that means is, perhaps, not altogether clear because "dependable automatists" are to be trained and awarded certificates, abnormal cases are to be treated, and negotiations with other institutions are encouraged, but surely not without fee. No, my chief criticism is simply: why do all this under the name of *psychology*? There is hardly an academic institution that would designate this subject as anything but "psychic research"; and certainly, if I judge aright, no scientific body of psychologists would endorse the selection of so ambitious a title for organizations at work in the field described in the pamphlet. The use of such a name involves bad taste and delusion, if it does not also bespeak audacity and professional discourtesy. Especially at this time of national service in an emergency ought scientific bodies to be particularly sensitive lest those in authority who are susceptible to misinformation proceed to belittle and to caricature the achievements already won. This is peculiarly true of so youthful a scientific discipline as psychology.

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THE POSITION AND PROSPECTS OF BOTANY

TO THE EDITOR OF SCIENCE: There are times when it is perhaps to be expected that the naturalist should feel, more insistently than other scientific men, the impulse to justify the pursuits with which he has chosen to occupy his time. The recent address by Dr. Gager, concerning the position and prospects of botany, printed not long ago in SCIENCE, prominently conveys an attempt of this kind. Like most of the pleas advanced by investigators in defence of their performances, this address develops the traditional theme of economic benefit accruing to society at large, and more specifically to certain groups of business interests, as the result of research activities.

It is strange that the peculiar futility of this type of apologetic seems not to be more generally appreciated. That the results of scientific inquiry contribute to the well-being of humanity is a tiresome truism, which has no bearing upon the support of research by

business interests. Perhaps in despair at the lack of other common ground upon which to engage in discussion with nonscientific acquaintances, perhaps from the honest conviction that economic good is the main consideration in this matter, investigators have at any rate been far too willing to point to useful inventions, commercial practises and hygienic improvements, as the crowning fruits of the spirit of discovery. To this habit may in large degree be traced the origin and perpetuation of that conception, commonly enjoyed by cultivated people of nonscientific interests, that science is a vaguely delimited mélange of engineering, sanitation, surgery and what not else.

To encourage the demand, upon specific economic grounds, that research in biology should receive the financial support of commercial organizations is futile and dangerous: it is also a tactical error of the first magnitude. It is futile because the appeal fails, and in the nature of things must fail, to impress the people for whom it has been designed; because it omits to reckon with the fact that "usefulness," in the ordinary understanding of that attribute, is an accidental by-product of research. It is dangerous because, as Dr. Sumner has clearly expressed it in another connection,¹ "the investigator who derives his support from the public treasury often finds his intellectual honesty sorely strained. More or less fictitious benefits to the community are conjured up in justification of work which ought to stand upon its own merits. The mental processes involved are insidious and the deceiver often ends by being himself deceived." It is a tactical mistake because it fosters a false conception of the relations of science to other pursuits; the continual insistence upon the "practical" justification, especially when this is urged as a basis for the commercial support of research, can only delay the arrival of a social readjustment which, by reducing the grossly disproportionate material rewards of commerce, will help to insure for science the social and

¹ Sumner, F. B., 1917, *Bulletin of the Scripps Instn. Biol. Research*, No. 3, p. 3.