silviculture and products, each equipped with men of special training for the work of their office. The office of operation will be charged with responsibility for the protection of national forests, for the building of roads, trails and other permanent improvements upon them for the organization of the force on national forests, and with the supervision of all business relating to the special use of national forest resources. The office of silviculture will have supervision of the free use and sale of timber from national forests, forest planting upon them, and will conduct forest studies on national forests as well as in cooperation with private owners in the district. The office of grazing will supervise grazing business in the district, except for the actual fixing of allowances, periods and rates, and will make studies looking to the improvement of the forage crop on national forests. The office of products will make both independently and in cooperation with private owners, studies leading to a more profitable use of timber on and off national forests within the district and to their preservative treatment. From the district foresters down, the personnel of the district offices is made up of men picked for their proved capacity, for their thorough training, and for their experience in the west. Most of them are men who not only have worked in the west after they entered in the service, but who lived in the west before they took up the government forest work. Many of them are men who formerly were employed on the national forests and have been promoted to larger responsibilities as a result of their high efficiency.

The decline in price of ingot platinum on the New York market from $38 per troy ounce on January 1, 1907, to $25 per ounce on December 31 of the same year, was accompanied by a notable decrease in production of fine platinum—from 1,439 ounces, valued at $45,189, in 1906, to 357 ounces, valued at $10,589, in 1907. Of the total output in the later year, 300 ounces came from Butte, Del Norte, Humboldt, Placer, Plumas, Trinity and Sacramento counties, in California, and 57 ounces from Coos, Curry and Josephine counties, in Oregon. In an advance chapter from "Mineral Resources of the United States, Calendar Year 1907," on the production of platinum in 1907, David T. Day, of the United States Geological Survey, says: "The decline in price in the United States increased the feeling of insecurity on the part of the platinum miners as to the value they would secure from their material and rendered the search for platinum less active." The total value of platinum metals imported and entered for consumption in the United States in 1907 is given as $2,684,642—a decrease of $1,104,117 as compared with the value of the imports in 1906. Continued interest is shown in the project for developing the platinum localities in the department of Cauca, Colombia, but development work has not yet reached the point of commercial production. Contracts for practically the entire supply of platinum in Russia have been made for a number of years ahead, and fluctuations in prices have no significance in regard to the total annual output.

Up to the present time Chinese weights and measures have been distinguished by their extraordinary diversity. In nearly every province different standards have obtained, and even in some towns carpenters, surveyors and tailors use measures differing from one another by quite an appreciable amount. A new system has now been introduced, which according to the London *Times,* is defined in terms of the metric system, and the various units are as follows. The new unit of length is the "tchi"; it is defined as exactly 32 centimeters. The capacity table has, as its unit, the "to," which is equal to 10.355 liters; while the unit of weight is the "lian," of 37.301 grams.

UNIVERSITY AND EDUCATIONAL NEWS

An unconditional gift of $50,000 to the endowment fund of the University of Virginia has been made by Col. Oliver H. Payne, of New York.

A gift of $50,000 from Mr. Frederick W. Vanderbilt, of New York City, for the purchase of additional property for the enlarge-

ment of Vanderbilt Square, now occupied by the two Vanderbilt dormitories, is announced.

MR. G. H. KENRICK, Lord Mayor of Birmingham, has made a gift of £10,000 towards the funds of Birmingham University. This is his third contribution toward the development of the university, his total gifts amounting to a sum of £25,000.

THE Oakland *Tribune,* as quoted in the Boston *Transcript,* says that President Benjamin Ide Wheeler, of the University of California, is at Ann Arbor and may accept the presidency of the University of Michigan, to succeed Dr. Angell, who wishes to retire. Dr. Wheeler's ten-year contract with California will expire on January 1. His salary at Berkeley is $10,000, whereas it is said that Michigan has offered him $15,000.

BY vote of the corporation Harvard University will remit the regular tuition fees in all its departments for any students, not exceeding five in any one year, who shall be accredited by the Prussian ministry of education as students qualified to pursue advanced studies.

DR. ARTHUR L. DEAN has been appointed instructor in industrial chemistry in the Sheffield Scientific School, of Yale University.

DR. GEORGE DEAN, chief bacteriologist at the Lister Institute of Preventive Medicine, has been appointed to succeed Professor D. J. Hamilton in the chair of pathology in the University of Aberdeen.

DISCUSSION AND CORRESPONDENCE

A REPLY TO THE COMMUNICATION OF MESSRS. LOEB, MAXWELL, BURNETT AND ROBERTSON[1]

THE idea of using temperature coefficients for the analysis of living processes developed in two distinct stages. The first stage was the thought of employing the method whenever chemical reaction was supposed to be the primary cause of a living process. For, if the process were chemical then its velocity must follow changes of temperature as does the velocity of chemical reaction. This was the Cohen-Loeb portion of the idea, as was clearly stated in the present writer's doctor's dissertation on the subject, from which Professor Loeb himself quotes in his search for evidence on his side, and as has been reiterated by him in his "Dynamics of Living Matter" (1906).

The second stage was the thought that if primary chemical action can be detected by comparing temperature coefficients—why then primary physical (non-chemical) action can also be detected by comparing temperature coefficients. This part of the idea was original with the writer, to the best of his knowledge, and was communicated by him as such in a letter to Professor Loeb from Berlin during the winter of 1906–7—a letter to which no reply was ever received. The idea was later published and received its first clear and unmistakable enunciation in April, 1907, in the *Archiv für Anat. und Physiologie,* Physiol. Abt., p. 113, in a paper entitled "Der Temperaturkoefficient der Geschwindigkeit der Nervenleitung."

At no previous time did Professor Loeb or any of his colleagues ever so much as hint to Snyder that they had grasped, to say nothing of having contemplated or having begun work along, this extended line of thought. All the work proceeding from their laboratory up to October, 1907, was, so far as the writer knew, a constant and unswerving effort to obtain chemical reaction temperature coefficients.

However, in a paper, which the writer has never been able to see, until the present writing, it would appear that Professor Loeb did have an inkling of a thought concerning the further application of temperature coefficient determinations. This paper is entitled, "On Chemical Methods by which the Eggs of a Mollusc, *Lottia gigantea,* can be Caused to become Mature."[2] Here the author says that he wanted to find out whether NaOH, by which he succeeded in removing the chorion (ovarian-membrane ?) of the eggs, had a "physical or chemical action."

As the title of that paper implies, he decided it was chemical action, for, in a single case the velocity of maturation was 105 at 18° and 315 at 8°.[3] But from the whole tenor of

[1] SCIENCE, November 6, 1908.

[2] Univ. of Calif. Public., Physiology, Vol. III., p. 1, 1905.

[3] *Loc. cit.,* p. 4.