pository and it is likely that other material of importance will follow."

A SPECIAL fund has been placed in the charge of the Committee on Scientific Research of the American Medical Association to support cardiologic research by young physicians in medical practice. Inquiries may be addressed to the committee, 535 North Dearborn Street, Chicago.

A GRANT of $10,000 has been made by the Carnegie Corporation of New York, in support of the research program of the Clinic of Child Development at the School of Medicine of Yale University. The clinic, which was founded in 1911 by Dr. Arnold Gesell, its present director, is investigating the mental growth of normal infants and devising clinical methods for the early diagnosis of developmental defects and deviations.

A GIFT of £2,000 from the American College of Surgeons has been received by the Royal College of Surgeons of England to help towards its restoration. The gift was offered immediately after the damage by enemy action was described at the recent congress of the American College by Surgeon Rear-Admiral Gordon-Taylor, who attended the congress as the representative of the Royal Navy and the Royal College of Surgeons. The American College has also set aside an additional sum to cover the cost of an appeal to the surgeons of the United States for contributions to a fund to assist still further in the restoration of the English college.

DISCUSSION

A TWELVE-MONTH COLLEGE YEAR: AN ALL-OUT PROGRAM

AFTER World War I, the author published an article, "A Twelve-Month College Year,"[1] in the interest of intensive instruction and the promotion of economy. It is now more important than ever that we follow these principles.

ECONOMIES. UTILITY OF EQUIPMENT AND TIME

We have an enormous investment in schools, colleges and universities, many of which are utilized only seventy-five per cent. of the year. The business world considers efficiency and economy important. Why not use educational facilities the year 'round and operate during the summer months when light and fuel costs are at a minimum?

Some may think that the cost of such a plan would be prohibitive. With present limited endowment incomes and economic resources in education, institutions of higher learning may not be able to operate the entire year. However, with less time loss in education, industry might be so impressed with the service rendered by educational institutions as materially to increase its financial assistance. State legislatures might increase appropriations, and the Federal Government might partially subsidize higher education.

EARLIER EARNING POWER

With a quarter system (four terms of twelve weeks each) students might enter colleges and universities on October 1, January 1, April 1 and July 1. October 1 seems to be the traditional opening date for the college year. Certainly June graduates of high schools would not have to wait until the fall to enter an institution of higher learning. If the quarter system does not appeal, three trimesters of sixteen weeks each can be scheduled. In any event, there are four weeks for vacations out of the fifty-two and these could be distributed in various ways.

Students, instead of losing time during long vacations now in vogue, could obtain a bachelor's degree in twelve quarters or in eight trimesters. What this means in the present emergency has already been stressed by government and by educators. Most college students could obtain their degrees before they are twenty-one. Whether graduates are to serve in industry or are to enter military service, intensive training makes them available at least one year earlier than the traditional system.

STUDENT FINANCES

Not all students could afford to attend college twelve months in a year. Many of them work during summer months to earn enough for tuition. This difficulty could be overcome in a number of ways: (1) With the repetition of courses each quarter or trimester or in alternate quarters or trimesters students who must work to obtain an education could remain out of college for a period during which courses which they have just completed are repeated. Having obtained funds they might take up where they left off. Students could go out at various times of the year and not be dependent on a summer period during which there is a dearth of work and a superabundance of student labor. (2) Establishing a cooperative system would not only help students to finance their education, but it would furnish a regular supply of trained workers for industry and for the nation. Assuming that each undergraduate course is offered each quarter or each trimester, students could be sent out in relays to obtain practical experience in industry, in teaching and in government service. With a definite number

[1] *School and Society*, 12: 291, 80–82, July 24, 1920.

going out each period of the year, industry would have a constant supply and could at the same time appraise desirable individuals who might be employed permanently upon graduating. The government in connection with its ROTC and perhaps similar units for the Navy and aviation could also have students in training, in relays, and be well equipped with a reserve group in time of emergency. The relay system of cooperation with industry is not new. It is in effect in a small number of institutions. The relay system in connection with government service does not exist to the author's knowledge. Certainly if the idea were generally applied, we could continuously afford educational, industrial and Federal fields a supply of individuals for training, and, upon graduation, give the nation a regular supply of skilled leaders. Also, let us not forget that students who can afford to attend college continuously will have their full earning or serving power at the end of two and two thirds or three years in the trimester and quarter systems respectively.

Faculty Salaries and Schedules

At present most teachers are paid only nine or ten months of the year. It is a tradition that the summer period is necessary for study, research or travel. How many teachers utilize the period for any of these purposes? Many of them necessarily work during the summer to increase incomes.

Assuming a twelve-month college year with a regular salary payment for each of the twelve months, the ambitious teacher could still be free during a quarter, trimester or even longer period by making the necessary arrangements and could probably have a much greater variety of study and research at his command than is possible during the summer term. Teachers might even gain practical experience in relays like the students, or they might plan work under great leaders who are not available during summer sessions. By working continuously over an appreciable number of years, an entire year might be available for travel or study. In other words, vacation or study periods could be planned or selected so as best to serve the individual's wants.

What about the traditional summer session? As not all schools are likely to subscribe to a plan like the one which has been proposed, short summer terms to meet state-teacher requirements and the wants of those who have been in the habit of taking summer courses could still be made available.

A Critical Period

A real "all-out" program requires full and immediate cooperation from every man, woman and child. Why not start the "twelve-month college year" now, even if parents and teachers have to make a monetary sacrifice, temporarily? Eventually industry, the state and the nation will make the sacrifice unnecessary.

Alexander Silverman
University of Pittsburgh

MEAN SEA LEVEL AND SAND MOVEMENT; A REPLY[1]

Speculative hypotheses which overlook factual evidence are luxuries which might well be dispensed with during the war, particularly where conclusions might lead to errors of judgment in military construction. A serious case of this nature appeared recently in this journal[2] and was the less excusable because its writer had been informed of the facts. In this article Leypoldt attempted to show that observations by U. S. Grant and by the writers relative to seasonal offshore shifting of sand in winter and onshore shift in summer have been based on erroneous interpretations, and that actually the sand is shifted along the shores of bays due to changing currents piling up at one end of each bay during one season and at the other end during another season. Leypoldt gives the impression that these shifts of the sand are well known and that the out- and in-movement of sand is nothing but an unwarranted assumption.

These arbitrary statements by Leypoldt will be a surprise to every one who has studied the California beaches either from a scientific or engineering point of view. According to Leypoldt, the sand beaches should be as wide on the average in summer as in winter, but the wide zones should be present at different places. This can be said to be absolutely contrary to fact. The writers have made over 50,000 soundings and observations on the width of beaches at La Jolla and elsewhere along the California coast during the past nine years. Short-interval observations have been made for the past four years along the entire length of the beach south of the Scripps Institution of Oceanography at La Jolla and for over a year LaFond has measured the depths along the three open ocean piers in the San Diego area at frequent intervals. Grant and his students have made seasonal measurements of beach profiles at a number of places along the coast near Los Angeles. Also the Los Angeles County engineers have measured profiles off the beaches in Santa Monica Bay at different seasons. The results have been remarkably similar. In nearly all cases the sand level has shown a decrease along the shore during winter and an increase outside. Numerous small beaches in coves of rocky headlands are completely washed out during the first winter storms and do not return until there has been a long

[1] Contributions from the Scripps Institution of Oceanography, New Series, No. 155.

[2] Harry Leypoldt, Science, 94: 2452, 607–609, 1941.