

and threaten rain. I had forgotten to take with me my—my—my—By the way, what is it that people always borrow and never return?" "Umbrella?" was suggested. "Yes, umbrella," and so on with other lacunæ in the conversation. The contributor notes: "While, as everybody recognizes, the inmost philosophical essence of the umbrella was thus intellectually grasped, the mere empirical designation of its silk, stick and whalebone would not turn up." The story illustrates very well the merely mechanical hindrance that aphasia is to the expression of thought, though in severe forms it may apparently deprive even a vigorously thinking mind of much of its capacity for properly expressing itself. It is this very feature which constitutes the essence of aphasia. Yet this is often supposed to indicate, even by the medical man, that there must be some impairment of the mental processes behind, not seldom to the perversion of justice in the making of wills and the regulation of business affairs.

#### IS MEDICINE ATTRACTIVE TO SCHOLARLY MEN?

Professor Thorndyke,<sup>1</sup> of Columbia University, New York, has traced the careers of 5,283 college graduates (1840-1900) who were elected to the Phi Beta Kappa membership in which is a recognized mark of scholarship. The object in doing this was to learn whether any given profession is gaining or losing in attractiveness to the type of men represented by membership in this fraternity. In the first place Professor Thorndyke finds that there is a remarkable uniformity in the percentage of Phi Beta Kappa men entering the leading professions, namely, from 64 to 68 per cent. for 1840-1900. But the percentages entering the various professions have been far from constant; thus the number taking up law was nearly twice as large in 1890-1894 as in 1840-1860. There has been considerable variation, too, in the number that have taken up teaching as a profession. The Phi Beta Kappa man was "three times as likely to become a clergyman in the middle of the century as he is to-day." The ministry has lost steadily in its attractiveness to this kind of man, and this loss has been quite uniform throughout the country. It is interesting to note that Professor Thorndyke's statistics show that medicine has not been a popular profession with what he calls scholarly graduates. From 1840-1885 the percentage ran from 8 to 4; from 1885 to 1894 7.5 and 7 per cent. entered medicine. He suggests that the gain after 1885 is due to the advance of medicine to the dignity of a science, and to the introduction into the colleges of elective courses in science. Professor Thorndyke's forecast of the future is as follows: "The future will probably witness a steady gain in medicine, a slight gain in teaching, a rapid but unstable gain in law, and a continued decline in the ministry." At the present time law and teaching get the lion's share of the scholarship of the country, as represented by the careers chosen by the members of Phi Beta Kappa. We believe that the indications point to a steady increase in the number of scholarly men choosing medicine for the field of their life-work. The opportunities for research, specialization and beneficent activities certainly can not but draw to medicine increasing numbers of high-minded college

students. The inherent attractiveness of medicine because of the altruistic nature of its functions will be reinforced markedly henceforth by the rapidly growing opportunities to study medicine under propitious conditions, and by the favorable attention it is now receiving at the hands of our best universities on the one side, and of our wealthy philanthropists on the other.

#### FURTHER OBSERVATIONS IN REGARD TO RADIUM.

The possibilities of such mysterious forces as those possessed by radium present an attractive field of speculation for the physician. May not the radiant energy emitted by radium possess pathogenic as well as curative, destructive as well as stimulating, powers on cells and cellular processes? Perchance, it may be forces of this kind that upset physiologic laws of cellular activity, and lead to abnormal proliferations of various kinds? But questions of this kind are not yet ripe for discussion. Actual experimental studies must furnish the necessary basis of facts from which it may be permitted to draw further deductions. Danysz<sup>1</sup> found that radium destroys the skin of guinea-pigs and rabbits, but subcutaneous and muscular tissue do not seem so sensitive as skin. The nervous tissue is also sensitive to its action. A sealed glass tube with salts of radium placed against the skin over the spine is followed by death in young animals. In older animals the osseous tissue seems to protect the spinal cord against the radiations. The effects of rays of radium on bacteria have not been studied extensively as yet, but both Danysz and Bohn show that various larvæ and embryos are profoundly modified in their growth, many being killed when subjected to the radiations; others developing into monstrosities because of unequal stimulation. Bohn further finds that radium exercises an especially intense action on tissues or cells in proliferation; non-fertilized eggs may undergo more or less parthenogenetic development and give rise to atypical formations. It has been found, too, that in animals whose skin was burned by the rays, the hair, in some cases, appeared to be forced into rapid growth. It seems that various effects are obtainable, depending on the tissue or cell exposed, as well as on the quantity and quality of the rays. Further experiments, no doubt, will yield even more interesting and conclusive results. We have commented on the announcement that in Vienna cancer has been cured by means of radium. In this particular direction much work will surely be done, and we may expect interesting developments.

#### THE VALUE OF EXPERIMENTAL STUDY OF TRANSPLANTABLE TUMORS.

The study of malignant tumors by the usual methods hitherto in vogue has not yielded many results of fundamental importance. A serious drawback to this study is encountered in the non-inoculability of human tumors in animals. The occurrence in certain animals of transplantable tumors furnishes the investigator with welcome opportunities to institute various lines of experimentation looking, for instance, to the production of immunizing and curative substances. Thus Jensen<sup>2</sup> of

1. Compt. rend. de l'Acad. des Sciences, 1903, cxxxvi, 461-4.

2. Centralbl. f. Bact., 1903, xxxiv, 28-34, 122-143.

1. Century Magazine, May, 1903.

Copenhagen was able to work with an inoculable, spontaneous tumor in a white mouse. He has carried the experimental inoculation through nineteen generations, and other experiments have been made with a view to producing active as well as passive immunity—at the same time as the tumor cells have been subjected to various procedures calculated to throw some light on their properties. This tumor occurred originally subcutaneously, and was in structure a carcinoma, which character it subsequently maintained. Subcutaneous injections of material rubbed up and suspended in salt solution were followed, as a rule, in fourteen days or so by the development of a small nodule at the site of injection, which slowly increases in size up to 15 to 20 grams. Metastases seem not to have occurred. During two and a half years successful transplantation has been made, as stated, through nineteen generations, about 50 per cent. of the animals used proved susceptible. As in the experiments of Leo Loeb, Herzog, Moran, it here also concerns a genuine transplantation, and not a true infection, because Jensen, who studied this point with the greatest care, found that simple crushing of the tumor cells before injection gave always negative results. Living cells must be transferred in order to secure success. These and the other experiments with transplantable tumors lend no direct support whatsoever to the parasite theory of tumors. In reality, successful transplantations in the same species are, so to speak, equivalent to the development of metastases in the individual. Jensen found that the tissue of the tumor he followed through so many animals remained alive for about eighteen days at a temperature of 1 to 3 C., at room temperature for about twelve days, but at bodily temperature only for twenty-four hours. The cells were killed by heating for five minutes to 47 C. and by exposure to -20 C. for twenty minutes. The tumor tissue was also killed readily by intense light, but the rays have the power to penetrate only for a small distance into the depths of the tissue. Here are examples of the procedures to which transplantable tumors may be subjected, with the view of laying bare some of the secrets of the tumor-producing forces: Carcinoma in mice appears to offer good starting points for valuable studies of this kind, and it is very desirable that examples of tumors in this and other animals be placed at the disposal of competent pathologic laboratories. Physicians who may come to know of tumors in mice, dogs, cats, etc., will render science a service by securing such animals for experimentation under the most favorable conditions.

## Medical News.

### CALIFORNIA.

**Aged Physician Injured.**—Dr. Malek A. Southworth, San Jose, while driving across a railway track at Wayne, was struck by a train and sustained severe scalp wounds and contusions, and the fracture of two ribs.

**Dr. Landis Released.**—The Supreme Court has decided that Dr. Amos J. Landis, Chico, convicted of forgery and sentenced to serve seven years in prison, was indicted by a biased and prejudiced grand jury, and given a partial trial; and, therefore, that the judgment of the lower court is reversed.

**Bogus Inspector Convicted.**—H. G. Myers, Stanford, who traveled around the country representing that he was commissioned by the State Board of Health to examine women, was

sentenced to imprisonment in the county jail for ninety days and to pay a fine of \$200, the limit allowed by law.

**Personal.**—Dr. Charles F. Taggart, Los Angeles, chief surgeon of the San Pedro, Los Angeles and Salt Lake Railroad, has gone to Salt Lake City to arrange a hospital service for the road. —Dr. Albert C. Rogers, Los Angeles, has returned from Europe. —Dr. Charles B. Brigham, San Francisco, had a paralytic stroke, July 10, and is lying seriously ill at his country place near Lake Tahoe. —Dr. Norman H. Morrison, San Francisco, sailed, July 16, for a tour of the Hawaiian Islands. —Dr. Thomas M. Hayden has succeeded Dr. George H. Aiken as president of the Fresno Board of Health. —Dr. John H. Meyer, San Bernardino, has begun his official work as county physician and superintendent of the county hospital, vice Dr. Samuel G. Huff. —Dr. and Mrs. Hoell Tyler, Redlands, have gone to Europe.

### COLORADO.

**Personal.**—Dr. Anders J. O. Lof, Aspen, returned, July 17, from Vienna.

**Illegal Practitioner Flees.**—"Dr." M. E. McGrath, who was arrested at Denver, charged with practicing medicine without a license, has fled from the city, forfeiting his bond of fifty dollars.

**Denver's Deaths.**—In May 198 deaths were reported in the city and county of Denver, equivalent to an annual death rate of 13.57 per 1,000. Of these 62 were due to tuberculosis; 18 to pneumonia, and 11 to valvular heart disease.

**Hospital Changes Name.**—Following the consolidation of the city and county governments, the name of the Arapahoe County Hospital has been changed to the Denver City and County Hospital. The management of the hospital is now under Health Commissioner Dr. Augustus A. Clough.

**Hospital Incorporated.**—Drs. Samuel T. Quick, Albert W. Killgore and E. Stuver have incorporated the Fort Collins Hospital Association, with a capital stock of \$50,000. Nearly all the physicians of the city are identified with the enterprise as stockholders, and as all physicians are guaranteed complete professional control of all cases they may send to the hospital, the undertaking is looked on with great favor, both by the profession and citizens generally.

### ILLINOIS.

**Maternity and Orphan Asylum.**—Contracts have been let for a two-story building for the St. Vincent Maternity and Infant Asylum, at Park Ridge, to cost \$20,000.

**National Guard Appointment.**—Dr. Arthur F. Wilhelmy, Decatur, has been appointed assistant surgeon in the Illinois National Guard, with the rank of first lieutenant, and assigned to the Fifth Infantry.

**Healers Jailed.**—Two alleged magnetic healers, who fleeced many citizens of Peoria and then levanted, have been captured in Omaha, and will be returned to Peoria, where they will be prosecuted on a charge of obtaining money under false pretences.

**No Typhoid in Illinois River Water.**—The commissioners appointed to investigate the condition of the Illinois River in the case of the State of Missouri against the State of Illinois, for alleged pollution of the Mississippi River, have been unable to find a single typhoid germ in the Illinois River.

**Births and Deaths.**—Circulars have been mailed by Secretary James A. Egan of the State Board of Health, to the physicians of Illinois, calling their attention to the new certificates of deaths and births, which they are required by law to fill out and return to the county clerk, and in Chicago and Peoria, to the Commissioner of Health, in the cases of births, and in the cases of deaths to the State Board of Health, except in cities where burial permits are issued. He accompanied the circular with sample certificates and with a circular issued by the United States census office on "The Relation of Physicians to Mortality Statistics." The new law is being very generally complied with.

### Chicago.

**Licenses for Infant Nurseries.**—Two licenses and permits to conduct infant nurseries have thus far been issued by the city clerk.

**Bequests.**—By the will of the late Horace P. Taylor, \$9,400 each is bequeathed to St. Luke's Hospital and the Chicago Baptist Hospital, to be used for endowing free beds.

**Physicians in Collisions.**—During the past three weeks Drs. Arthur R. Edwards, Frank W. McNamara, Louis A. Greensfelder