

Deadly Atrophy.

"The average age at which a thesis for the doctor's degree is presented is twenty-eight," says the Westminster Gazette. This is supposed to be the first productive work. But the thesis "is likely to be the working over of the old ideas of an old professor. In the meantime the creative instinct has atrophied." The best educational method is that in which the beginner assists the expert. Professor Wilberforce has stated, as the result of the experience in the Cavendish Laboratory, that the more advanced students appear to work best when their teachers are in difficulties. This is, of course, inspiring to the teacher. But he does not get the same stimulus in teaching large classes. Three-fourths of the leading scientific men in America earn their living by teaching. The professor at the university will receive about one-third of the salary enjoyed by the president, and his position is tenable only by the favor of that luminary. The scientific man in the service of the State receives the salary of a clerk and is treated as a clerk. Thus "we are in danger of sliding down the lines of a vicious spiral until we reach the stage at which the professor and his scholarship are not respected because they are not respectable." Some day the difficulty may be met by the establishment of research positions in the universities, &c., well paid and free. Senator Vilas has left funds to the University of Wisconsin for the foundation of ten professorships with salaries of \$2,500 a year and freedom from routine teaching, the position and the salary being for life. Such posts should attract men of exceptional ability. "Poverty, celibacy, obedience, and obscurity are exotic ideals which cannot be used to make the scientific career attractive." And if the men are not to be found in the country, why not import them? Nine leading men of science have in the past seven years returned to the countries of their birth, and but one has in that period been attracted to America—"one scientific man among seven million immigrants." Seven years ago a list of the first thousand Americans of distinction in science was prepared, and this has now been revised for studies of the conditions of heredity and environment. Of these 126 were foreign born, seven being in the first hundred. There were twenty-

five Englishmen in the 1903 list, and none in that of 1910. An analysis of the new list shows clearly that the cities of America are failing to produce scientific men, "and presumably other men of intellectual performance, to an extent that is ominous." The centres of vast wealth and richly endowed universities show "a sinister record." The southern States can claim but five men in the thousand.

America ought soon to be in the van as far as medical research is concerned, if great endowments will attract the right men. There is the Rockefeller Institute for Medical Research, in New York, with an endowment of close on seven million dollars. The State of New York is enlightened enough to support a laboratory for the investigation of cancer at Buffalo. There is an institute at Philadelphia for the study of tuberculosis, founded by the benevolence of Mr. Phipps. And Mr. and Mrs. McCormick, of Chicago, have established a school of research for the investigation of infectious diseases. But the feeling seems to be growing up that, after all, the State rather than public-spirited men and women is the right source to which appeal for funds and organization should be made in the case of matters so intimately connected with the interests of the whole community. Of the forty-three State and territorial legislatures in session two years ago, no less than twenty-eight passed laws with reference to tuberculosis. And since then ten States have spent some \$100,000 for the sole purpose of educating the public as to the nature and treatment of that disease. Indirectly, of course, much is done by public departments. For instance, the Bureau of Chemistry, through the Acts which have been passed relative to the purity of food and drugs, has rendered signal service to the public health. In April last the President recommended Congress to vote \$50,000 for the establishment of a cancer laboratory. But the most important sign of the trend of public opinion in America is the recent Bill for the rounding-up of all these activities of Government, and the formation of one great department, with the prevention of disease and the safeguarding of the public health as its main objective. Americans are not at all disposed to forget such facts as those upon which Professor Townsend recently dilated in a speech before the