

significant that we succumb to the temptation to look a little further behind the ill-disguised vanity of this professor who poses as the only infallible authority on matters Chinese. There is a further reason for our doing this: in replying to Professor de Groot's speech, the Secretary of the Berlin Academy intimated that the professor's writings contained much information and valuable suggestions for one desiring to understand the actual politics of the China of to-day. A significant example of this kind of practical politics may be found in Professor de Groot's "Religious System of China," which is little more than an ill-digested mass of Chinese quotations couched in bad English. In Volume III., page 1052, we find this gem:

Should European armies have occasion a second time to march on Peking, it will be worth their while to try whether the campaign can not be shortened and loss of life spared by military occupation of the burial grounds of the Imperial family. Indeed, should the Court receive an ultimatum that these tombs would be destroyed one after another by explosives, its belief in the efficacy of Fung-shui would be weakened, and the Court would implicitly submit to the foreigners' demands.

As a recommendation for a *modus operandi* to compel Chinese submission, this is, perhaps, without a parallel. Even the German government in the Boxer debacle of 1900 did not stoop to such depths. And yet, the paragraph just quoted is characteristic of the fiber of a man who professes to be a sinologue and shows neither a glimpse of sympathy with nor a particle of understanding of the Chinese people.

Professor de Groot's political zeal led him to accomplish a still greater triumph in the field of sinology. In 1904 he gave to the world, in two volumes, his "Sectarianism and Religious Persecution in China." In this he attempts to prove that the Chinese are the most intolerant people on earth, and he accomplishes his task by wilfully and maliciously ignoring the whole series of Imperial toleration edicts, of which the Jesuit missionaries are still proud. This sycophantic pro-

duction was justly condemned by all thoughtful men; and, it is to be hoped, it will remain for all time a unique feat in the history of science that a university professor prostituted and humiliated his scholarship to political ends, dictated by an ephemeral fad of the time. No doubt many of our misconceptions of the Chinese are due to the distortions of missionaries, made with a view of proving their case, based on the necessity of their securing funds to carry on their work, but we are hardly prepared for such a perversion of facts at the hands of one who pretends to call himself a sinologue.

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RELATION OF PLASMA-GROWN TISSUE TO SENILITY

TO THE EDITOR OF SCIENCE: The success of the method for prolonging the life of tissues grown in plasma, devised in the laboratory of Dr. Carrel, has led to such a widespread misconception of its significance, as evidenced by articles in medical and semi-popular scientific periodicals, that a note regarding it may not be out of place. It is needless to say that these extravagant claims are not based on Dr. Carrel's conclusions as published, but upon independent interpretations of the results of his experiments.

The mere statement of the conclusions generally reached by writers in the above mentioned periodicals is sufficient to indicate their character, to the biologist at least. It is first claimed that the cessation of cell activity of the tissue in the plasma after twenty days or so is due to the same conditions which produce senility. Then it is pointed out that the actual cause of the cessation in the plasma is the accumulation of waste products, therefore the proof is complete and the great discovery at last accomplished, that senility is the result of the accumulation of waste products in the cells. On the same grounds death of a human being through uremic poisoning would be considered as due to old age, and a man suffocated by drowning be a victim of senility. Obviously there is no evidence that the causes which stop the activity of the cells in the plasma are the same as those which produce

senility. Senility is that cessation of activities that comes when external conditions are favorable.

Then, the fact that washing away the accumulated waste products at intervals leads to the reviving of the cell activities is considered to be a case of rejuvenescence and the conclusion drawn that since cell proliferation is more active at the end of eighty days than at the beginning, a method of obtaining immortality of the tissues has been discovered. Of course the normal length of life of the tissues used is several years, and indications of actual senility could not be expected before that time. The fact that the cells continue actively to proliferate has no significance as regards rejuvenescence, any more than the healing of a wound in the skin of an aged man by the normal processes of cell proliferation would indicate that his body was becoming juvenile. Cell proliferation in detached pieces of tissue is an expression of their inherent power of responding to form-regulation stimuli, which in living bodies governs the size and shape of the developing individual and even after maturity exhibits itself in regeneration of lost parts, production of new organs and in the processes of healing. The conditions in this respect of the cells of the detached piece, are evidently such as to call for the highest possible manifestation of cell proliferation, and this needs no other explanation.

The accumulation of waste products may be one of the results of the primary causes of senility, but even this much is not proved by these experiments.

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SCIENTIFIC BOOKS

Die Muskeln des Stammes. By PAUL EISLER. Jena, Gustav Fischer. 1912. Pp. 715, 106 figures, chiefly in colors.

This volume on the muscles of the head, neck, and trunk by Professor Paul Eisler, of Halle, constitutes a part of the extensive handbook of human anatomy now being edited

by von Bardeleben with the cooperation of the leading anatomists of Germany. It is one of the most satisfactory of the series and illustrates how possible it is to make a real contribution in a field of work which for over three centuries has been as carefully cultivated as has gross human anatomy. The subject is considered from the purely morphological aspect, the mechanics of muscle action being left for treatment in other volumes of the series by Rudolph Fick. The only references to the physiological aspects of the subject relate to the theoretical developmental mechanics of the fascia, the tendons, and to a slight degree, of the muscles themselves. In the treatment of the various muscles of the head, neck and trunk admirable brief reviews are given of the various groups of muscles in each region. Then there follows an accurate description of each muscle of the group. The drawings to illustrate the various muscles are all from original sketches by the author, are all excellent, and in many cases are the best which have yet been made of the muscles treated. The topographical relations of the muscle are next considered and then the innervation. Eisler has made numerous personal contributions to this latter subject and gives a much fuller description of the innervation of the muscles treated than has hitherto been attempted. A brief description of the blood supply is next given and this is followed by an admirable summary of variations in structure, based not only on an extensive review of the literature, but also upon Eisler's own long experience in the dissecting room. Sometimes after the consideration of an individual muscle and always after the treatment of a group of muscles, the author gives an excellent summary of the comparative anatomy and the ontogenetic development of the muscle or muscle group. From "practical" considerations the author has, in the main, grouped the muscles according to the topographical relations in the adult, although he treats of the platysma with the superficial muscles of the head instead of with the muscles of the neck. This topographical grouping