

indispensable for the physician to know; these we must study in a broad way, and, in fact, the laws of reproduction have been discovered for the most part, not from the study of man, but of the lower animals. We can hardly exaggerate the necessity of the physician's knowing the structure of the uterus and its functional changes. Concerning the uterus we have, indeed, much to learn still. It is only recently that we have discovered that pregnancy induces an extensive destruction of maternal tissue, the mucous lining of the uterus undergoing degenerative changes such as we have been accustomed to think of as exclusively pathological. In a short time the epithelium of the pregnant uterus is destroyed and the glands break down. These appearances have been noted in the so-called uterine moulds, and have been usually considered as evidence of disease, but we now know that they are normal appearances of pregnancy. So with the canalized fibrine of the chorion of the ovum: that, too, is a normal condition of pregnancy. In these instances we have microscopic pictures which we have hitherto associated with the presence of disease, but which are really healthy growths. May we not expect that embryological research, in elucidating these changes, will lend a helping hand to her sister, pathology, who always has, and always must lag a little behind the knowledge of normal structure? To the physician embryology has to offer the key to many malformations of harelip, cleft palate, a foramen between the cardiac ventricles, congenital umbilical hernia, hermaphroditism and pseudohermaphroditism, and a long array of other arrests of development. Indeed, embryology ought to form a part of every medical curriculum, and I am glad that you include it in your plan. May our colleges in the States imitate your example!

Embryology requires to be studied broadly, and by the comparative method. Only by so doing can a just estimate of the facts be secured. Confine your studies to the development of man, and you will never understand it. Give the mind range and opportunity, and it will soon pick out by comparisons drawn between various species that which is essential and significant. It is from such studies that we have been brought lately to deep problems. We see now in the course of development that the early

embryonic cells have a large nucleus with very little protoplasm, and that the older cells show a great increase in the amount of protoplasm in proportion to the nucleus. You are all familiar with the famous apothegm which designates protoplasm as the physical basis of life, but in the light of what I have just said, it might be as well defined as the physical basis of advancing decrepitude. Again, we observe that it is only in the simpler tissues that there is much possibility of growth. As the tissues become more highly differentiated, they lose their power of growth. You all know that the cells of the spleen, of the skin, and of other simple tissues, multiply in the adult, but in the highly specialized nervous system we never find any cell divisions. Now this loss of reproductive power, coincident with specialization of structure, may prove to be but the beginning of that final loss we call death. If this be true, then death is a penalty we pay for having a high organization. We pass beyond the present bounds of science, but hope and hypothesis ever lead us, and who dares to say where the bounds of discovery are set in biology? Is not this very building a monumental assertion that we have not reached them yet?

The reason why I allude to these things is largely a personal one. Prof. Wright I have known for many years, and I have often had occasion to wish for his counsel or for his advice, because I have always found that he is one of those minds which naturally take themselves to the consideration of the larger problems of biology. These general questions and these complications of knowledge, which lead us to meditate upon the farthest reaching problems, will receive at his hand a larger share of consideration than they would get from many others of the biologists of the world. I congratulate you all most heartily upon the possession of this beautiful building. We have in the United States, unfortunately, scarcely any building equal to this; none, I think, superior to it for the purpose for which it is designed. Even my own University of Harvard, one of the richest and oldest in the States, has not anything I would call better than this. I thank you all for your most hospitable welcome. I had the pleasure of being here some ten years in the official capacity of examiner. I notice there is a certain