

examine are comparatively simple, when the complex phenomena of disease in its many forms are presented to you, you will find that you cannot or will not do so, but will be guided by empiricism, or by what the text-book or lecturer says should be seen; and as the student is, so is the practitioner.

Best you should think I am over-estimating the value of laboratory work in chemistry as a training for the profession of medicine, I will give a few reasons for the faith I have in its power of developing the scientific habit of thought. But first let me offer a word of explanation. I do not in the least under-estimate the training afforded by the other two great primary subjects, anatomy and physiology. They are, when properly studied, of very high educational value; but still, their greatest utility is in the intrinsic value of the subject matter taught. Every fact of these branches has a direct bearing on medicine and surgery. Anatomy, besides, is an excellent training for the memory, and also cultivates the observation, but not the same sort of observation that is developed by experimental science. You learn anatomy in precisely the same way that a cabman learns the streets and principal buildings of the city, by going over the ground again and again, till the relation of nerve, artery, and vein are as familiar to you as that of sidewalk, curbstone, and pavement to the city carter. It is only in this way you can learn anatomy. You must see the relative position of parts, and see them again and again, and from all sides, before you can find your way with certainty about the human body. You would be as much justified in undertaking to drive a London Hansom cab because you had made a study of Baedeker's Guide Book, as you would to enter the field of surgery without years of training in the dissecting room. Observation, and careful observation, is required and developed by anatomy, but not that which involves casual relations. Remember, I am speaking of human anatomy, not of general morphology, nor of comparative anatomy. In human anatomy, observation is not associated with reasoning as to the relation between one fact and another. There is no mental effort, such as tracing an observation back to the grounds of belief in its truth, and forward again to some other observation for discovery or verification. Such processes of thought are required, however, in