

in various places instead of opportunity to see the work of others.

In order to bring about such improvements, the preparation of men whose aims shall always include contributing to medical knowledge, production must begin at early periods. We have witnessed the subsidence in value of the amphitheatrical clinic and didactic lecture as teaching methods, the growing importance of laboratory and other means of instruction to small classes.* Nor is there anything new in the advocacy of research methods in the undergraduate work in medicine.† There have always existed real teachers whose very presence bespoke independence of thought and action unhampered by routine, but they have been investigators and unfortunately relatively few.

A great advance in this regard, the increased contact between students and men whose time is in large part devoted to investigation, has been accomplished by the change in many of the better medical schools to a university basis of the teaching in the fundamental branches, anatomy, biology, chemistry, physiology, pharmacology and pathology. With similar changes in the clinical branches there would be incentive to productive investigation throughout the medical course. The impossibility of teaching medicine at present under such ideal advantages is the chief reason for the failure to graduate men with a firmly implanted research-habit.

It is not to be wondered at that men who have shown promise by completing investigations under capable leaders in physiology or anatomy, for example, return to these fields after graduation, or, entering practice, become buried in the industry of winning a large income.

The change from the laboratory atmosphere of these university-taught fundamental studies to the clinic and small dispensary classes as at present conducted in the last years of undergraduate work is characterized by curious phenomena. The transition is a startling one in the sudden presentation of the living and the dead human body for study; to attain skill in the recognition of the many illnesses it is liable to with knowledge of their therapy is enthusiastically begun. It is common to hear expression of relief that laboratory and experimental work are finished. More effectual, perhaps, than all other influences tending to stifle whatever of value obtained

* Bayard Holmes, "The Seminary Method in Teaching Surgery," *Journal American Medical Association*, 1896, xxvii., 317-318.

† J. M. Dodson, "The Research Idea and Methods in Medical Education and Practice," *Journal American Medical Association*, 1905, xlv., 81-87.