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# THE HUMANIZING OF SCIENCE<sup>1</sup>

By HARVEY CUSHING, M.D.

NEW HAVEN, CONN.

In the prefatory chapter of Dr. George Sarton's monumental undertaking,<sup>2</sup> there occurs the following statement: "The History of Science, being a new discipline, is not yet well organized or well circumscribed and attracts the attention not only of experienced scholars but of amateurs, dilettanti and cranks."

From which of these categories I have been elevated to this position of prominence I hesitate to enquire. It certainly was not from the ranks of experienced scholarship, nor have I any pretence even as an amateur historian. Though long active in what is said to be a scholarly profession, yet I would be put to it to tell just where the technique of medical practice—the art of medicine—leaves off and the science of medicine begins.

Both are essentially "humanistic" in its wider sense, in so far as the one is directed toward the alleviation of the diseases to which mankind is heir and the other toward their ultimate banishment. The chief differ-

<sup>1</sup>Presidential address before the History of Science Society, Washington, December 28, 1934.

2 "Introduction to the History of Science." Carnegie Institution, Washington, 1927, Vol. I.

ence between modern science and the natural philosophy of the ancients is said to lie in our greater inclination to put things to the test of experiment; and while medicine is constantly broadening its scientific background, in a certain sense every drug a doctor administers and every operation a surgeon performs is experimental in that the result can never be mathematically calculated, the doctor's judgment and the patient's response to his prescriptions being variables indeterminable by any law of averages. But this is far from making medicine a scientific calling.

That admission being made regarding the only subject with which I can claim familiarity, I must at once confess that I do not clearly perceive just where the humanities leave off and science in general begins, nor why in the schools any conflict should have arisen between them, for they spring from the same hellenic roots and seem so essentially supplementary.

Naturally on the part of teachers there is constant elbowing for the curricular recognition of their subjects and with energetic leadership emphasis from time to time may shift in one direction or the other.