

may become, under the skilful hand of the master workman, a thing of beauty and utility.

Science and scientific thinking depend on the hypothesis that in all the phenomena of nature and mind there is none which is not joined with the rest by the law of cause and effect, none which is not a link in the chain of conceivable relations.

Nature is the *alma mater* of science, and science in all its phases deals with nothing unnatural. In the study of nature through the sciences the mind is led to the recognition of uniformities of condition and result. To learn the lesson implied in those uniformities, and, having entered into the spirit of nature's teaching, to go on to discover new relations of cause and effect, has been the test of the truly scientific mind in every age. It is thus seen that the man who studies the sciences is training his mind to scientific methods of thinking.

Yet it must not be supposed that time spent in the study of the sciences is alone productive of the desired effect. Any other line of study conducted on correct principles may be quite as effective. In the development of a scientific mental attitude more depends on methods than on the particular study pursued. The method of study should not be such that the result is an indiscriminate conglomeration of facts. Better a few facts thoroughly assimilated and definitely related than a cumbersome mass of ill-assorted material.

The sage advice, "know thyself," must be heeded by him who aims to cultivate a practically scientific mind. But not only must he know himself. He must be a student of the minds of men, learning how to deal with them on their own ground; to understand their joys and sorrows, their hopes and fears, their stabilities and caprices. This knowledge may be obtained by study of mental philosophy and general literature; but most thoroughly and practically by mingling with men in every-day life. Let the recluse and the slave to text-books beware lest they secure only a one-sided development.

As results of training the mind to scientific methods of thought will follow those qualities which are most admirable in man, and most necessary to success in any of the pursuits of life.

As the mind strives to trace less and less obvious resemblances and form higher generalizations, concentration will be developed, the consummate condition of success.

He who investigates thoroughly is schooled to that "passionate patience," which gives great momentum though it compels a slow advance. He is like the glacier, slow-moving, yet of tremendous energy. With patience comes exactness even in details which though seemingly insignificant may be chief factors in determining the result.

The man of scientific mind does not regard the dictum of any one as infallible or as a criterion of unlimited applicability until he has thoroughly investigated for himself and become satisfied of its truth. There is developed a spirit of virile independence and keen discrimination.

The man whose spirit and methods of thought are scientific is recognized by his regard for truth, his fidelity, his submission to the bounds imposed by natural law, and his contempt of all that is lawless and abnormal, by his freedom from infatuation and pedantry. He is a man whose moderation is known to all men, whose patience is learned from nature herself, whose thought moves year by year in larger circles. Such a man alone is fitted to deal with the complications of the present, to hand down the attainments of the past, and train those minds which must mould the future to meet their responsibility.

A. W. N.