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BACON'S COLLEGE OF RESEARCH¹

It is a common trick of the human mind to estimate the progress of science in a sort of backward survey, reversing the perspective glass of history by turning its eye-piece away from the observer. We unconsciously project into the record the connotations of a later experience and thus distort its true values. The process is as prejudicial to our judgment as it is flattering to our vanity. This is what Sir Henry Wotton means when he says, "we are extremely mistaken in the computation of antiquity by searching it backwards."

Nowhere is the computation of antiquity backwards more fatal to a clear understanding of the past than in dealing with language. We think of Shakspeare, for example, not as employing the English of the early 17th century, the only English that he could possibly know, and doing it with a fullness and accuracy that has never been surpassed by any of the great masters of human speech; we think of him as patiently endeavoring to clothe his resistant genius in the connotations of twentieth-century English, and hitting them not quite happily.

So it is with Bacon. We think of him as attempting to formulate science in the terms of our modern concepts, and project into his words scientific connotations that were not born until a century later.

Let us, then, on this three-hundredth anniversary of the publication of a book which revolutionized scientific method and set in motion a "new Philosophy," whose infant society of a handful of enthusiasts was to be the parent of great scientific organizations like the British and American Associations for the Advancement of Science—let us, then, take 1623 as a bench-mark for our theodolite and make a forward survey of the "proficiency and advancement" that learning has achieved during the last three centuries.

Putting ourselves in Bacon's position at the beginning of the seventeenth century and surveying the then state of learning through his eyes, we find an intellectual system that is based upon Plato and Aristotle. These great thinkers, master and pupil, had assumed as the foundation of knowledge certain self-existent and predetermined principles—Plato calls them "ideas," Aristotle, "forms"—which it was the business of nature to illustrate and of man to realize. Plato had concerned himself chiefly with the manward relations of his "ideas," and organized them into

¹ A paper read before Section L of the American Association for the Advancement of Science on the 300th anniversary of the publication of Bacon's *de Dignitate et Augmentis Scientiarum*, December 31, 1923.