

FROM FRANCIS BACON, *INSTAURATIO MAGNA* OF 1605–1620

Since . . . satisfaction with the present induces neglect of provision [preparation] for the future, it becomes absolutely necessary, that the excess of honour and admiration with which our existing stock of inventions is regarded be . . . stripped off, and men be duly warned not to exaggerate or make too much of them. For let a man look carefully into all that variety of books with which the arts and sciences abound, he will find everywhere endless repetitions of the same thing, varying in the method of treatment, but not new in substance, insomuch that the whole stock, numerous as it appear at first view, proves on examination to be but scanty.

. . . Observe also, that if sciences of this kind had any life in them, that could never have come to pass which has been the case now for many ages — that they stand almost at a stay, . . . [and] what was a question once is a question still, and instead of being resolved by discussion is only fixed and fed; and all the tradition and succession of schools is still a succession of masters and scholars, not of inventors . . . [N.B. “inventor” = discoverer (in Latin *invenio*) not inventor in our modern sense.]

Some there are indeed who have committed themselves to the waves of experience, and almost turned mechanics; [N.B. “mechanic” = practical artisan] yet these again have in their very experiments pursued a kind of wandering inquiry, without any regular system of operations. And besides they have mostly proposed to themselves certain petty tasks, taking it for a great matter to work out some single discovery; — a course of proceeding at once poor in aim and unskillful in design.

As for those who have given the first place to Logic, . . . they have indeed most truly and excellently perceived that the human intellect left to its own course is not to be trusted . . .

For my own part at least, in obedience to the everlasting love of truth, I have committed myself to. . . the hope of providing at last for the present and future generations guidance more faithful and secure.

I, . . . dwelling purely and constantly among the facts of nature. . .

. have established for ever a true and lawful marriage between the empirical and the rational faculty [in other words, between knowledge based on practical experience and knowledge based on logic]. . . . I contrive [declare] that the office [role] of the sense[s] shall be only to judge the experiment, and that the experiment itself shall judge the thing [should be the judge of the truth or success of an hypothesis]. . . . Those . . . who aspire not to guess . . . but to discover and know; who propose not to invent . . . fabulous worlds of their own, but to examine and dissect the nature of this very world itself; must go to facts themselves for everything. . . .

For man[kind] is but the servant and interpreter of nature; what he does and what he knows is only what he has observed of nature's order. . . .

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**MODERN VERSION OF
BACON'S *MAGNA INSTAURATIO* (1620)**

When people are content with the present, they do not make plans for the future. I think that it is necessary to question our contentment and warn everyone not to be so satisfied with the present. Because if you look carefully around at all the books we now have on art and science, you will find that they contain nothing new, and say only the same things over and over.

Also, our knowledge of science has not progressed at all, and the same old questions remain unanswered. Instead of discussing ideas, and coming up with new answers to problems, our schools are just teaching the same old things.

There are a few people who do conduct experiments and invent things, but when they do, they don't follow a standard set-by-step procedure in their work or a well-planned overall strategy. They also work on projects that are not very important.

People who are interested in working on important things, begin their research by simply reading the same old books that other people have written on subject, and don't do any new research on their own. People do not have faith in their own abilities to figure things out.

What I would like to do is to suggest a new method people can follow when they want to work on an important problem. This way, our knowledge of science will progress.

I believe that people should restrict themselves to recording the results of carefully-designed experiments. The experiments themselves will show whether a hypothesis is true or false. Those scientists who don't want to be just guessing, but really to be able to discover and know things, must rely not on someone else's previous conclusions, but on their own factual evidence for everything.