



The philosophical elements in the writings of Francis Bacon

Radhey Shyam Suman

Patna University, Patna, Bihar, India

Abstract

My paper proposes a philosophical interpretation of Francis Bacon as an example of scientific methodology. His works argue for the possibility of scientific knowledge based only upon inductive reasoning and careful observation of events in nature. Bacon's books are quite startling in their vision of organized research. His account reminds us of a modern semanticist analyzing the sources of verbal confusion or of a psychologist explaining the origins of irrational prejudice. Bacon was not himself a great scientist or a great philosopher, he was a master of prose exposition where colorful and memorable phrases helped to popularize a new view of science.

Keywords: Philosophy, empiricism, experiments, behaviorist, social psychology, scientific logic, syllogism, phenomena, idols, Intellectual fallacies, imagination, realism Utopian, botanical garden, Creatures perspective houses, Nature aphorism

Introduction

Bacon ranges over the vast battle-ground in which human research struggles with natural hindrance and human ignorance, and in every field, he sheds light. He attaches great importance to physiology and medicine. But he objects to the Lax empiricism of contemporary doctors, and their Facile tendency to treat all ailments with the same prescription- usually physic. He wants the physicians to experiment more widely, to illuminate the human anatomy, to dissect and if necessary vivisection, and, above all, to construct an easily accessible and intelligible record of experiments and results.

In psychology Bacon is almost a "behaviorist" he demands a strict study of cause and effect in human action, and wishes to eliminate the word "chance" from the vocabulary of science. He invents a new science- social psychology: philosophers should diligently inquire into the powers and energy of custom, exercise, habit, education, example, imitation, emulation, company, Friendship, Praise, Reproof, exhortation, reputation, laws, books, studies etc.

Sorceries, dreams, predictions, telepathic communications must be subjected to scientific examination to discover if such effects, attributed to superstition, flow from natural causes.

Bacon remained in ST. Alban's after the Collapse of his political career. Retired, he was now able to focus on one of his other passions, the philosophy of science. From the time he has reached adulthood, Bacon was determined to alter the face of natural philosophy. He swore to create a new outline for the sciences, with a focus on empirical scientific methods- methods that depended on tangible proof- while developing the basis of applied science. Unlike the doctrines of Aristotle and Plato, Bacon's approach placed an emphasis on experimentation and interaction, culminating in "the commerce of the mind with things" Bacon's new scientific method involved gathering data, prudently analyzing it and performing experiments to observe nature's truths in an organized way. He believed that when approached this way, science could become a tool for the betterment of humankind.

About Bacon's philosophy Macaulay expressed the opinion that induction as described by Bacon was a very old-fashioned affair, over which there was no need to make much fuss, "Induction", writes Macaulay, has been practiced from morning till night by every human being since the world began. The man who infers that mince pies disagreed with him because he was ill when he at least, has employed unconsciously but sufficiently, all the tables of the 'Novum Organum', but this should not diminish the value of Bacon because it is the function of Logic to formulate the experience and methods of intelligent people. After all it is the purpose of any discipline to try by rules to turn the art of a few into science teachable to all. His work the Novum Organum is a philosophical work. In his work the Novum Organum Bacon details a new system of logic he believes to be superior to the old ways of syllogism. This is known as the Baconian method.

Baconian method, methodical observation of Facts as a means of studying and interpreting natural phenomena. This essentially empirical method was formulated early in the 17th century by Francis Bacon, an English philosopher, as a scientific substitute for the prevailing systems of thought, which, to his mind, relied often on fanciful guessing and the mere citing of authorities to establish truths of science. "After first dismissing all prejudices and preconceptions, Bacon Method, as explained in Novum Organum, consisted of three main steps: First, a description of facts: second, a tabulation, or classification of those facts into three categories- instances of the presence of the characteristic under investigation, instances of its absence, or instances of its presence in varying degrees: third the rejection of whatever appears, in the light of these tables, not to be connected with the phenomenon under investigation and the determination of what is connected with it.

Part of Bacon's scheme, the 'Novum organum', which has already appeared in 1620 gives "true directions concerning the interpretation of nature".

In the 'Novum Organum' Francis Bacon classified the intellectual fallacies of his time under fair headings 'he called

idols'. He distinguished them as idols of the cave, idols of the marketplace and idols of the theatre. The idols of the tribe are certain intellectual Faults that are universal to mankind or at only rate, very common.

The idols of the cave are the intellectual peculiarities of individuals. One person may concentrate on the likenesses another on the differences, between things one may fasten on detail, another on the totality.

The idols of the marketplace are the kinds of error for which language is responsible. The Fourth and Final group of idols is that of the idols of the theatre, that is to say mistakes systems of philosophy in the broadest in which it embraces all belief of any degree of generally.

The advancement of learning is the most attractive of his philosophic works because it is the most broadly comprehensive and human, because its strength and vision are least impaired by dead technicalities, and because it is, with the Essays, the great example of his English prose.

That is a philosophic treatise which reviews the state of knowledge in Bacon's own time. The design of the work is to clear away the objections to learning to estimate its true value, and to analyse the methods of advancing knowledge. There are two divisions of this work. Book I States and answer arguments that had been brought forward against learning whole Book 2 provides a detailed classification all the kinds of knowledge, with the deficiencies noted. The argument against learning comes from theologians, from politicians and from the habits and studies of learned men themselves. The first Bacon answers in their own terms: The Second he answers by an appeal to history and experience: and the third he explains with reference to the "three vanities" responsible for attacks on learning in general.

Book2 of The Advancement of learning is brilliant piece of classification, full of witty definitions and apt and lively phrases so characteristic of Bacon's vigorous expository style. Bacon in this work subordinates rhetoric to logic and imagination to reason.

Bacon's work History of Henry 6 is a philosophical history, probing in its impartial analysis of events and psychological understanding of personalities. It is a conscientious study of king Henry's policy in the light of which Bacon is able to give an Integrated picture of the events of his reigns.

The New Atlantis is at once a feble, a work of political philosophy. The celebrated description of Salomon's House raises the question of the place of the scientist in society and the allusion to Plato's critics and Timaeus in the work's title suggests an engagement with that philosopher's description of the ideal state. Further a reference to more's 'Utopia', together with the recognizably 'Utopian' framework of the narrative, promises responses to other 'best state' exercises, perhaps including Andreae's Christianopolis and Campanella's civitas Solis'.

The detailed description of Salomon's house is quite fascinating. He describes a facility in which great O'Caves have been built, deep underground, as well as towers half a mile high, built on top of mountains so that their tops are 3 miles above Sea Level: the caves are in some cases 3 miles deep. Salt water and Freshwater Lakes Fountains, wells, and pools, baths and great enclosures for parks and gardens: and finally "great and spacious houses". There were "dispensatories, or shops of medicine", along with houses for the preparation of papers, linen, silks, and tissues.

Out afield in the gardens and parks, Bacon describes what would now be understood as zoos, botanical gardens and the perfection of new medicines and plants, as well as the breeding of new species; he describes now they would "make a number of kinds serpents, warms, Flies, Fishes of putrefaction: where of some are advanced to be perfect creatures, like birds or beasts, and have sexes, and propagate. Neither do we do this by chance, but we know beforehand of what matter and co-mixture what kind of those creatures will arise "the high towers would be used for "insolation refrigerations and conservation of bodies", as well as for the observation of meteors and the weather.

On the more scientific side Bacon described "perspective houses", for the study and use of color and light; "engines houses where are prepared engines and instruments for all sorts of motion". There were also "sound-houses, where we practice and demonstrate all sounds, and their generation and houses of deceits of the senses, where we represent all manner feats of juggling false apparitions, impostures and illusions, and their fallacies". Finally, Bacon devotes a single sentence to describe "a mathematical house, where are represented all instruments, as well of geometry and astronomy".

The researchers would be called "Fellows", and their activities would be divided into 3 kinds. There were 12 fellows that sailed to foreign countries, under the names of other countries; their task was to bring back books and results of experiments done. Elsewhere, these 12 were called "Merchant of light". Then there were 3 fellows involved in the process of finding general truths from experiments. These three, who were doing what would now be called theoretical work, were called the "Interpreters of Nature", their job was to raise the discoveries by experiments into greater observations, axioms, and aphorisms". Finally, and for Bacon by for the most important component of the institute, were the fellows involved in experimental work.

Bacon's book is quite starting in its vision of organized research- it could have only been written by someone who had himself been involved for most of his life in politics and in the organization of affairs of the state, and who was also a Lawyer. As Fiction, the New Atlantis is rather lifeless, about as exciting as a re-organization plan for local government. The vision did not inspire Bacon's political masters- his attempts to get James 1 to back his plan to set up such an institute fell on deaf ears. But the plans outlined in the novel later has a crucial impact on the development of science as an organized discipline they served not only as an effective inspiration and modal for the Royal Society, Founded in 1660 and supported by the crown and organized into fellows of the Royal society, but also exercised a strong influence on the subsequent organization of research institutes, and ultimately of the scientific community. This novel is, in fact, Bacon's philosophy of science presented in romantic form by a written.

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