

grand results of modern discovery. Truth, to be worthy of our hearty acceptance and belief, must be based upon fact. According to the ancient method, theories were formed independently of facts. Their connection was not perceived, and the intimate relation in which the one stands to the other was unrecognized. So complete a disjunction of theory from fact, could not but give rise to a system of knowledge bereft of that solidity and certainty without which knowledge must degenerate into mere fancy. But the Baconian method does not include hypothesis. It makes use of it provisionally. Its formation may be contemporaneous with the first recorded observation of a particular fact, every repetition of which may shew its confirmation, and finally result in its verification. Hypothesis and experiment go hand in hand; the speculative and logical faculties are both exercised—the theoretical and practical co-operate. Imagination furnishes hypothesis—observation supplies facts; and both are employed as means for the attainment of an end. Hypothesis thus entirely changes its character in the inductive philosophy of Bacon. It is now simply provisional, when before it was final;—it is now subordinate to facts, when formerly it sustained to them a relation of absolute independence;—it is now co-operative, when, under the old system, it was isolated. Its truth depends entirely upon the facts observed, for which it is meantime held to be an explanation; and the disclosure of new facts may, at the same moment, cause it to be abandoned. The ultimate object of the Aristotelean system was the attainment of *abstract* truth. It was very often directed to objects beyond the power of analysis, and which, supposing analysis possible, were incapable of yielding any practical result. Now, as opposed to this, the grand object of the Baconian system may be said to be the attainment of *practical* truth. Speculation does not imply inactivity, and yet it does. The preceding age, we cannot but admit, was mentally active; but its activity failed to blossom, and bore no tangible fruit. Its activity was of a barren and unproductive character. It is an age which bore upon its branches neither leaf nor bud nor blossom. In the age before us, the buds of thought begin to sprout, and lovely blossoms unfold their delicate surfaces, heralding the appearance of the luscious fruit. Action becomes visible, practical and productive. From being local and spasmodic, it has become universal and permanent. Like a swollen stream which has overflown its banks, it overspreads the face of society, coursing out for itself new channels, and conveying freshness and fertility to parched and barren soils. It vitalizes every department of society, and preserves them from stagnation and death. Men are observing, experimenting and analysing, when before they were pausing, speculating and imagining. Formerly, a slavish submission to authority froze up the currents of human thought; now, the sun of liberty has arisen in her splendour. Beneath her reviving ray the ice-bound streams broke their fetters, and bound forth as captives from their cells, instinct with rippling life. No one who has for a moment thought upon the circumstances which have given rise to the several discoveries which constitute the glory of the age in which we live, but must be convinced