

ual being—the relations between the mind that recognizes and the object that is recognized—separated the dialectics into the two celebrated schools of *Realists* and *Nominalists*. The almost forgotten contests of these schools of the Middle Ages deserve a notice here, because they exercised a special influence on the final establishment of the experimental sciences. The Nominalists, who ascribed to general ideas of objects only a subjective existence in the human mind, finally remained the dominant party in the fourteenth and fifteenth centuries, after having undergone various fluctuations of success. From their greater aversion to mere empty abstractions, they urged before all the necessity of experiment, and of the increase of the materials for establishing a sensuous basis of knowledge. This direction was at least influential in favoring the cultivation of empirical science; but even among those with whom the Realistic views were maintained, an acquaintance with the literature of the Arabs had successfully opposed a taste for natural investigation against the all-absorbing sway of theology. Thus we see that in the different periods of the Middle Ages, to which we have perhaps been accustomed to ascribe too strong a character of unity, the great work of discoveries in remote parts of the earth, and their happy adaptation to the extension of the cosmical sphere of ideas, were gradually being prepared on wholly different paths and in purely ideal and empirical directions.

Natural science was intimately associated with medicine and philosophy among the learned Arabs, and in the Christian Middle Ages with theological polemics. The latter, from their tendency to assert an exclusive influence, repressed empirical inquiry in the departments of physics, organic morphology, and astronomy, which was for the most part closely allied to astrology. The study of the comprehensive works of Aristotle, which had been introduced by Arabs and Jewish rabbis, had tended to lead to a philosophical fusion of all branches of study;\* and hence Ibn-Sina (Avicenna) and Ibn-Roschd (Averroes), Albertus Magnus, and Roger Bacon, passed for the representatives of all the knowledge of their time. The fame which in the Middle Ages surrounded the names of these great men, was proportionate to the general diffusion of this opinion of their endowments.

Albertus Magnus, of the family of the Counts of Bollstädt, must also be mentioned as an independent observer in the do-

\* Jourdain, *Sur les Trad. d'Aristote*, p. 236; and Michael Sachs, *Die religiöse Poesie der Juden in Spanien*, 1845, s. 180-200.