

of the people, in their early uncultivated condition, to the motions of the stars, as we learn from the fact that the stellar worship of Jupiter, practiced under the Lachmites by the race of the Asedites, included Mercury, which, from its proximity to the sun, is less frequently visible, it would nevertheless appear that the remarkable scientific activity manifested by the Arabs in all branches of practical astronomy is to be ascribed less to native than to Chaldean and Indian influences. Atmospheric conditions merely favored that which had been called forth by mental qualifications, and by the contact of highly-gifted races with more civilized neighboring nations. How many rainless portions of tropical America, as Cumana, Coro, and Payta, enjoy a still more transparent atmosphere than Egypt, Arabia, and Bokhara ! A tropical sky, and the eternal clearness of the heavens, radiant in stars and nebulous spots, undoubtedly every where exercise an influence on the mind, but they can only lead to thought, and to the solution of mathematical propositions, where other internal and external incitements, independent of climatic relations, affect the national character, and where the requirements of religious and agricultural pursuits make the exact division of time a necessity prompted by social conditions. Among calculating commercial nations (as the Phœnicians) ; among constructive nations, partial to architecture and the measurement of land (as the Chaldæans and Egyptians), empirical rules of arithmetic and geometry were early discovered ; but these are merely capable of preparing the way for the establishment of mathematical and astronomical science. It is only in the later phases of civilization that the established regularity of the changes in the heavens is known to be reflected, as it were, in terrestrial phenomena, and that, in accordance with the words of our great poet, we seek the "fixed pole." The conviction entertained in all climates of the regularity of the planetary movements has contributed more than any thing else to lead man to seek similar laws of order in the moving atmosphere, in the oscillations of the ocean, in the

That a movement like that of the vault of heaven should have been given to the whole tent, as has often been asserted, appears to me very improbable. In the *Chronica Monasterii Hirsaugiensis*, edited by Trithemius, we find scarcely any thing beyond a mere repetition of the passage in the *Annales Godefridi*, without any information regarding the mechanical construction. (*Joh. Trithemii Opera Historica*, Part ii., Francof., 1601, p. 180.) Reinaud says that the movement was imparted "par des ressorts cachés." (*Extraits des Historiens Arabes relatifs aux Guerres des Croisades*, 1829, p. 435.)