

it existed centuries ago, towards the discovery of those pre-existent laws which govern the department of all matter of which the earth is composed, and towards the knowledge of its properties. We shall speak merely of Alchemy, the forerunner of Chemistry, without tracing, as it could be traced, the progress of the science out of the regions of superstition and ignorance into the realm of wisdom and light.

The word alchemy is supposed to be derived from the Arabic particle *al*, equivalent to the English 'the,' and a Coptic root *Khems*, signifying what is obscure or hidden. The science, if by such a name the blind inquiries of the alchemists can be called was known as the occult, the hidden, because it had for its principal aim the discovery of the secret art of the transmutation of all the baser metals into gold, the finding or preparation of a universal medicine, and of a universal solvent.

Concerning the date of the rise of Alchemy there has been much dispute, some carrying its origin so far back among the mists of time as to assert that Moses possessed considerable knowledge of the art because he dissolved the golden calf. Of this point the limits of our paper will not admit discussion. There is, however, good reason to believe that Alchemy originated in Arabia not much prior to the eighth century, a time when Arabic learning had great influence on European culture.

The question of the greatest interest to us is :—What was the cause or origin of the alchemical belief? How could one man, much less thousands of men of subtlest intellects delude themselves with the belief of the possibility of transmuting one kind of matter into another, crude lead, mercury, or tin, into weighty, lustrous gold. The growth of the idea is not difficult to trace. In the earliest period of Greek philosophy there was a marked tendency to make one element or principle fundamental and to evolve the other elements and the world from it. Thus Thales of Miletus who lived in the sixth century B. C., affirmed that water was the first principle of things. On the other hand, Anaximenes regarded fire as the primal element, Herakleitos fire, Pheukides earth and some philosophers grouped two elements together. But the oldest physical theory of which we have any knowledge and the one from which, as we shall show, the alchemical belief arose, is the theory that regarded the world as composed of earth, air, fire, and water