

# Chapter 1

## **There Are Movements of Sublunary Bodies in a Fluid Environment, Which Nobody Dealt with so Far**

It is obvious that movements of sublunary bodies must occur in a space which must not be filled and occupied by hard, consistent and absolutely continuous bodies because two bodies cannot penetrate each other. Consequently, the space in which a body must move, must be either absolutely empty or at least occupied by a divisible and fluid body, or a body subdivided into particles which can be expelled easily from their position to yield to an arriving body which has to move. The area surrounding the earth is occupied by fluid bodies such as water, air and fire, in which the motions of the sublunary bodies occur.

As far as I know, nobody discussed the natural movements of bodies which are in a fluid environment, i.e., why and how bodies which present with different magnitudes, weights and shapes move at a greater or a smaller velocity in certain proportion in the fluid environment. Consequently, my purpose is to explain and to complete this chapter of physics-mechanics which is missing hitherto. But, not to bore the Readers with a dull repetition of matters which were treated by others, I will suppose known all that which has been treated in elementary mechanics on the nature of the balance, lever, pulley and all the rest resulting from these instruments and sharing their nature. I will present only some points which are particularly useful for this theory on the natural motions of the bodies, not all of them, but only those which result from the motive force of gravity.