61. That when an entire fluid body moves simultaneously in some direction, it must necessarily carry along with it any solid body which is immersed in it.

From the preceding, it is clearly perceived that a solid body, immersed in a fluid and at rest in it, is held there as if in equilibrium. Further, no matter how large it may be, it can always be driven in one direction or another by the least force; whether this force comes from elsewhere, or whether it consists in the fact that this entire fluid simultaneously moves in a certain direction; as rivers flow to the ocean, or as all the air flows toward the West when the East wind blows. When this occurs, it is absolutely necessary for a solid body situated in such fluid to be carried along with it: nor is this contradicted by the fourth rule; according to which, as I stated before, a body which is at rest cannot be set in motion by any smaller than itself, no matter how rapidly the smaller body may be moving.

62. That a solid body, which is thus carried along be a fluid, is not therefore moving.

If, moreover, we turn our attention to the true and absolute nature of movement; which consists in the transfer of a moving body from the vicinity of other bodies contiguous to it, and which is equal in both the body which is said to move and the contiguous body away from which [it is said that] it moves, although it is not customary to speak of the two in the same way {and to say that both move}; we will clearly know that a solid body which is thus carried along by the fluid in which it is contained does not, strictly speaking, move as much as it would if it were not carried along by this fluid; for it certainly moves away less from the neighboring particles of this fluid {when it follows its current than when it resists it}.

…which terms are so obscure that I am constrained to leave them here in their language, because I cannot interpret them. (And, in fact, the words, "motion is the act of a being in potency, insofar as it is in potency," are not clearer for being in French.) The nature of motion of which I speak here is so easy to know that mathematicians themselves, who among all men studied most to conceive very distinctly he things they were considering, judged it simpler and more intelligible than their surfaces and their lines. So it appears from the fact that they explained the line by the motion of a point, and the surface by that of a line.

The philosophers also suppose several motions that they think can be accomplished without any body's changing place, such as those they call *motus ad formam*, *motus ad calorem, motus ad quantitatem* ("motion with respect to form," "motion with respect to heat," "motion with respect to quantity"), and myriad others. As for me, I conceive of none except that which is easier to conceive of than the lines of mathematicians: the motion by which bodies pass from one place to another and successively occupy all the spaces in between.

***Le Monde*, Ch. 7 "On the Laws of Nature"**

Part II: The Last Word

I openly acknowledge that I know of no kind of material substance other than that which can be divided, shaped, and moved in every possible way, and which Geometers call quantity and take as the object of their demonstrations. And that there is absolutely nothing to investigate about this substance except those divisions, shapes, and movements; and that nothing concerning these can be accepted as true unless it is deduced from common notions, whose truth we cannot doubt, with such certainty that it must be considered as a Mathematical demonstration. And because all Natural Phenomena can thus be explained (Lat. *explicari*), as will appear in what follows, I think no other principles of Physics should be accepted, or even desired. [II, 64]