

year; and it is weaker in the solstices, which is occasioned by the combination of the attraction of the moon and sun. 2. The wind often alters the direction and quantity of this motion, particularly that which constantly blows from the same quarter. It is the same with respect to large rivers which convey their waters into the sea and produce a current there, often extending several leagues, which is strongest when the direction of the wind agrees with the general motion. Of this we have an example in the Pacific Ocean, where the motion from east to west is constant and very perceptible. 3. We must remark that when one part of a fluid moves, the whole mass receives the motion; now in the motion of the tides a great part of the ocean moves in a very sensible manner, and consequently the ocean is agitated by this motion throughout its whole extent.

Perfectly to comprehend this we must attend to the nature of the power which produces the tides. We have observed that the moon acts upon the earth by a power called attraction by some, and by others gravity: this force penetrates through the globe, is exactly proportioned to the quantity of matter, and
decreases