

as a subject for their prize dissertation the laws of the impact of bodies. Bernoulli, as a competitor, wrote a treatise, upon Leibnitzian principles, which, though not honored with the prize, was printed by the Academy with commendation.¹⁴ The opinions which he here defended and illustrated were adopted by several mathematicians; the controversy extended from the mathematical to the literary world, at that time more attentive than usual to mathematical disputes, in consequence of the great struggle then going on between the Cartesian and the Newtonian system. It was, however, obvious that by this time the interest of the question, so far as the progress of Dynamics was concerned, was at an end; for the combatants all agreed as to the results in each particular case. The Laws of Motion were now established; and the question was, by means of what definitions and abstractions could they be best expressed;—a metaphysical, not a physical discussion, and therefore one in which “the paper philosophers,” as Galileo called them, could bear a part. In the first volume of the *Transactions of the Academy of St. Petersburg*, published in 1728, there are three Leibnitzian memoirs by Hermann, Bullfinger, and Wolff. In England, Clarke was an angry assailant of the German opinion, which S’Gravesande maintained. In France, Mairan attacked the *vis viva* in 1728; “with strong and victorious reasons,” as the Marquise du Chatelet declared, in the first edition of her *Treatise on Fire*.¹⁵ But shortly after this praise was published, the Chateau de Cirey, where the Marquise usually lived, became a school of Leibnitzian opinions, and the resort of the principal partisans of the *vis viva*. “Soon,” observes Mairan, “their language was changed; the *vis viva* was enthroned by the side of the *monads*.” The Marquise tried to retract or explain away her praises; she urged arguments on the other side. Still the question was not decided; even her friend Voltaire was not converted. In 1741 he read a memoir *On the Measure and Nature of Moving Forces*, in which he maintained the old opinion. Finally, D’Alembert in 1743 declared it to be, as it truly was, a mere question of words; and by the turn which Dynamics then took, it ceased to be of any possible interest or importance to mathematicians.

The representation of the laws of motion and of the reasonings depending on them, in the most general form, by means of analytical language, cannot be said to have been fully achieved till the time of D’Alembert; but as we have already seen, the discovery of these laws

¹⁴ *Discours sur les Loix de la Communication du Mouvement.* ¹⁵ Mont. iii. 640.