Note on the Leibniz Controversy

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If several bodies revolve about a common center & the vis centripeta be reciprocally as the square of the distance of the body from the center: the orbs described by the bodies will be all of one & the same kind but may differ from one another in species; & such are the Conic Sections. And if the vis centripeta be reciprocally as the cube of the distance the Orbs described will be all of another kind but differ from one another in species, such as are the Spiralis Logarithmica, the Spiralis Hyperbolica, & three other species of Curves. And if in either case a man should shew how to describe the Curve which a body shall describe when projected from any given place with any given velocity in any given determination of motion: he would at the same time shew how to describe all the curves in which a body can move in that case. M^{r} Newton in the XVIIth Proposition of his first Book of Principles has done this in the first case, that is, when the force is reciprocally as the square of the distance, & has found that the Curve is always one of the three Conic Sections. If M^{r} Bernoulli had done this in the second case & found that the Curve described will be always a Logarithmic Spiral & will not comprehend all the Curves which can be described by such a force

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