

## LAPLACE

The spirit of a wholly deterministic outlook, and of the corresponding scientific programme, was strikingly captured in a famous passage by Laplace, the great astronomer and mathematician.

"Given for one instant an intelligence which could comprehend all the forces by which nature is animated and the respective situation of the beings who compose it - an intelligence sufficiently vast to submit these data to analysis - it would embrace in the same formula the movements of the greatest bodies of the universe and those of the lightest atom; for it, nothing would be uncertain and the future, as the past, would be present to its eyes. The human mind offers, in the perfection which it has been able to give to astronomy, a feeble idea of this intelligence. Its discoveries in mechanics and geometry, added to that of universal gravity, have enabled it to comprehend in the same analytical expressions the past and future states of the system of the world. Applying the same method to some other objects of its knowledge, it has succeeded in referring to general laws observed phenomena and in foreseeing those which given circumstances ought to produce. All these efforts in the search for truth tend to lead it back continually to the vast intelligence which we have just mentioned, but from which it will always remain infinitely removed."

Pierre Simon, Marquis de Laplace, *A Philosophical Essay on Probabilities*, translated from the 6th French edition by F.W. Truscott and F.L. Emory, (New York: Dover, 1951) p.4. This work originated in a lecture course delivered in 1795, published as the 'Essay' in 1814 and incorporated, as the introduction, into his great *Theorie analytique des probabilités* of 1820. The original French version may be inspected in *Oeuvres Completes de Laplace*, tome septieme (Paris: Gauthier-Villars, 1886) p. VI,