course of the last hundred years much has been done to make it more easily understood.

James Bernoulli had already in his celebrated book which bears the title, 'De arte conjectandi,' promised to show the application of the mathematical doctrine of probability to political, moral, and economical subjects,[1] but the fourth and last part of the book which was to give this, remained unfinished. It was left to his successors, notably to Daniel Bernoulli, to take up this side of the question. But the first practical statesman who — as we are told by Condorcet[2] — held the

14. Condorcet.

1838), still rank with the best that has been written. Stanley Jevons sums up his opinion in the words: "This theory appears to me the noblest creation of the human intellect, and it passes my conception how two men possessing such high intelligence as Auguste Comte and J. S. Mill could have been found depreciating it, or even vainly attempting to question its validity. To eulogise the theory is as needless as to eulogise reason itself" ('Principles of Science,' vol. i. p. 227).

[1] James Bernoulli (1654-1705) was the eldest of the celebrated family of mathematicians. Daniel, his nephew, lived half a century later (1700-82). The 'Ars Conjectandi' was published posthumously in 1713 by Nicholas, another nephew of the author. In a letter to Leibniz the author says: "Absolvi jam maximam libri partem, sed deest adhuc præcipua, qua artis conjectandi principia etiam ad civilia, moralia, et œconomica applicare doceo." Daniel Bernoulli, as we saw above (vol. i., chap. v. p. 434), was the father of the kinetic theory of gases, of which more hereafter. He was also the first to make a distinction between mathematical and moral expectation, — a difference which led Laplace to distinguish between "fortune physique" and "fortune morale," to which reference was made in connection with Fechner's psycho-physical measurements.

[2] 'Essai sur l'application de l'Analyse à la Probabilité des Décisions, Rendues à la pluralité des voix' (Paris, 1785): "Un grand homme, dont je regretterai toujours les leçons, les exemples, et surtout l'amitié, était persuadé que les vérités des sciences morales et politiques, sont susceptibles de la même certitude que celles qui forment le système des sciences physiques, et même que les branches de ces sciences qui, comme l'astronomie, paroissent approcher de la certitude mathématique. Cette opinion lui était chère, parce qu'elle conduit à l'espérance consolante que l'espèce humaine fera nécessairement des progrès vers le bonheur et la perfection, comme elle en a fait dans la connoissance de la vérité." It is evident from this extract that Condorcet (1743-94) thought that his friend Turgot shared his own well-known opinions as to the unlimited perfectibility of the human race.