

A Philosophical Essay
On
PROBABILITIES

BY
PIERRE SIMON, MARQUIS DE LAPLACE.

TRANSLATED FROM THE SIXTH FRENCH EDITION

BY
FREDERICK WILSON TRUSCOTT, PH.D. (HARV.),
Professor of Germanic Languages in the West Virginia University,

AND
FREDERICK LINCOLN EMORY, M.E. (WOR. POLY. INST.),
*Professor of Mechanics and Applied Mathematics in the West Virginia
University; Mem. Amer. Soc. Mech. Eng.*

Rough **D**raft **P**rinting
1902.

TABLE OF CONTENTS.

PART I.

A PHILOSOPHICAL ESSAY ON PROBABILITIES.

CHAPTER I.

Introduction.....	PAGE I
-------------------	-----------

CHAPTER II.

Concerning Probability.....	3
-----------------------------	---

CHAPTER III.

General Principles of the Calculus of Probabilities.....	11
--	----

CHAPTER IV.

Concerning Hope.....	20
----------------------	----

CHAPTER V.

Analytical Methods of the Calculus of Probabilities.....	26
--	----

PART II.

APPLICATION OF THE CALCULUS OF PROBABILITIES.

CHAPTER VI.

Games of Chance.....	53
----------------------	----

CHAPTER VII.

Concerning the Unknown Inequalities which may Exist among Chances Supposed to be Equal.....	56
--	----

	PAGE
CHAPTER VIII.	
Concerning the Laws of Probability which result from the Indefinite Multiplication of Events.....	60
CHAPTER IX.	
Application of the Calculus of Probabilities to Natural Philosophy..	73
CHAPTER X.	
Application of the Calculus of Probabilities to the Moral Sciences..	107
CHAPTER XI.	
Concerning the Probability of Testimonies.....	109
CHAPTER XII.	
Concerning the Selections and Decisions of Assemblies.....	126
CHAPTER XIII.	
Concerning the Probability of the Judgments of Tribunals.....	132
CHAPTER XIV.	
Concerning Tables of Mortality, and the Mean Durations of Life, Marriage, and Some Associations.....	140
CHAPTER XV.	
Concerning the Benefits of Institutions which Depend upon the Probability of Events.....	149
CHAPTER XVI.	
Concerning Illusions in the Estimation of Probabilities.....	160
CHAPTER XVII.	
Concerning the Various Means of Approaching Certainty.....	176
CHAPTER XVIII.	
Historical Notice of the Calculus of Probabilities to 1816.....	185