

# Leibniz and the Ethics of Probability

How does Leibniz view the use of probability in the moral domain?

## 1. Scholastic moral probabilism rejected

*Moral probabilism*: In moral matters, it is permissible to follow an opinion if this opinion is probable. An opinion is probable if it is supported by reason or authority.<sup>1</sup>

Table 1. Two competing opinions (scholasticism, schematic)

Opinion A	Opinion B	To follow
Not probable	Not probable	Neither
Not probable	Probable	B
Probable	Not probable	A
Probable	Probable	A or B

Leibniz rejects moral probabilism:

“... Jesuits, who introduced a **highly damaging *probabilism***, a so great laxness in moral opinions, that there was hardly any vice which could not be made to look acceptable under an apparent excuse.” (Leibniz to Count Ernst, Dec. 1691)

“The default of the lax moralists in this article has been, to a good extent, to have a **very limited and highly inadequate notion of the probable**”. (*Nouveaux Essais*, IV.ii §14)

## 2. Leibniz on probability in the moral domain

*Probability*: based on natures of things • objective • branch of logic • complements demonstration <sup>2</sup>

Probability is “drawn from the nature of things **in proportion to what one can know**, and what one can call the likelihood”. (*Recommandation pour instituer la science generale*, Apr.-Oct. 1686?)

“But **probability is not an absolute thing**; it is drawn from certain things given a with certainty, which, although they do not suffice to resolve the problem, nevertheless ensure that we judge correctly which of the two opposites is the easiest given the conditions known to us.” (*Præcognita ad encyclopediam sive scientiam universalem*, c. 1678-79)

<sup>1</sup> A selection of works in the tradition of scholastic probabilism: Spinola, *De libera et prudenti agibilium electione in moralibus* (1648); Pallavicino, *Disputationum* (1653); Caramuel y Lobkowitz, *De probabilitate* (1663) and *Theologia moralis fundamentalis* (1676); Terillus, *Fundamentum totius theologiae moralis* (1669); De Esparza, *Cursus theologicus* (1685).

<sup>2</sup> Some texts by Leibniz touching on probability: *De conditionibus* (1665); *Dissertatio de arte combinatoria* (1666); shorter tracts on games of chance, annuities, and the estimation of the uncertain in the 1670s and 80s; the project of the *Scientia generalis*; *Nouveaux Essais* (1703); *Théodicée* (1710); his correspondence with Count Ernst in the 1690s, and with Jakob Bernoulli in the early 1700s.

*Morality*: domain of action, choice • largely consequentialist • aiming at good, happiness

Probability in the moral domain (reconstruction):

1. Probable notions and arguments are ubiquitous in moral reasoning.
2. The study of probability allows one to better assess cases involving probable arguments.
3. The study of probability allows one to better assess numerous cases in moral reasoning.

Case study<sup>3</sup>:

Table 2. Two competing courses of action (Leibniz)

	Probability	Quality	Product
Act A	5	4	20
Act B	6	3	18

### 3. Limits of probability: Exchange with Jakob Bernoulli (1655-1705)

Is the calculation of probabilities about moral affairs always useful?

Bernoulli plans a part of his book in progress (sc. *Ars conjectandi*) on “how to apply the principles of the art of estimation to civil, moral, and economic affairs.” (Bernoulli to Leibniz, Oct. 3, 1703)

Leibniz: “The estimation of probabilities is extremely useful, although in several political and legal situations there is not much need for fine calculation as there is for the accurate recapitulation of all the circumstances.” (Leibniz to Bernoulli, Dec. 3, 1703)

Can we get moral certainty about probabilities from empirical data?

Bernoulli’s puzzle: How much more probable is it for a twenty-year-old to survive a sixty-year-old than vice versa? We can know this a posteriori from repeated observations.

“For had I observed it to have happened that a young man outlived his respective old man in one thousand cases, for example, and to have happened otherwise only five hundred times, I could safely enough conclude that it is twice as probable that a young man outlives an old man as it is that the latter outlives the former.” (Bernoulli to Leibniz, Oct. 3, 1703)

Leibniz: “There appears to me to be a difficulty in this conclusion: that happenings which depend upon an infinite number of cases cannot be determined by a finite number of experiments”. (Leibniz to Bernoulli, Dec. 3, 1703)

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<sup>3</sup> Leibniz’ description: “Suppose that the probability of A is 5, and its quality 4. The product will be 20. Suppose that the probability of B is 6 and its quality 3, the product will be 18. It follows one should follow A more than B even if it is less probable. Thus the good person will avoid the smallest risk of sin even if a great advantage is proposed (...), indeed no greater evil can bring them to renounce being a good person.” (*Elementa juris naturalis*, 1671)