

Symmetric and Asymmetric Analysis in Probability Theory

Yahya Mohamed

The book (Induction and Subjective Logic) included a separate section with three chapters on the interpretation of probability logic. The first dealt with the theories of Western philosophers, the second was related to the thesis of the thinker Muhammad Baqir al-Sadr, and the third dealt with what we presented of a new vision on the subject after we met the criticism of other theories during the previous two chapters.

The common weakness of these theories was that they neglected one of the main sections of probability. They did not work on identifying it, its origin, and its relationship to justifying all kinds of probability. In our opinion, probabilities are divided into two main parts from which all other types are derived. We called one of them the symmetrical probability and the other asymmetrical. The latter is the cornerstone upon which the functions of other probabilities (posteriori) are based, or it is the basis in the emergence of the symmetrical probability of external concepts, and it is also the basis on which the inductive evidence can be justified in his epistemological course to prove and explain things. Neither the al-Sadr probability (indefinite knowledge) nor any other probabilities on which the Western العلم الاجمالي philosophers who specialize in this matter have a bet are of any benefit.

We have distinguished between the symmetric and asymmetric possibilities; if the first arises when the cases are not distinguished from each other, as in the case of a similar two-sided currency, then the other arises on the contrary when there is no symmetry or regularity between the possible cases of occurrence and is justified by the principle of distinction or The cases are different and the same. It is a probability that expresses the existence of clues that differ in their

probabilistic power concerning the probability of an event that is intended to be proven or explained.

We also revealed that this type of probability is not subject to quantitative computation, unlike the first. So we subjected it to a kind of tolerant appreciation. Its importance stems from its founding of another class of probability that we call interpretative (inductive) probability, and it represents the only link between the two symmetric and asymmetric probabilities, and from it, the posteriori probabilities of both marginal and discretionary probabilities are formed. As for the symmetrical probability, both logical and a priori probabilities are derived from it.

Thus, all types of probability are based on either symmetric or asymmetric probability, but its foundation assumes the existence of a mathematical ratio between the number of appropriate cases and the total possible states. Without this ratio, it is not possible to derive any subtype. We call this ratio the mathematical probability, which is the link in which the derived probabilities are established.

Mathematical probability is the estimated ratio between the number of appropriate cases of the event and the total possible cases, regardless of whether these cases are equal or not. That is, this ratio presupposes the existence of the probability, so it depends on the previous two parts of the probability. Also, the ratio in this way is a fixed mathematical ratio to the extent that the number of both sets of cases is determined. According to this unconditional case, it speaks of a hypothetical individual who has no relation to the objective reality of the incident. However, on this ratio, all other derivative probabilities depend, according to the conditions that pertain to those cases.

Thus, we have three types of probability, which are symmetric, asymmetric, and mathematical, and five types of probability are derived from them: logical, exact, priori, estimating, and interpretive

probability.

We have defined each one of them as different from the other types. The most important derived probability is the interpretive probability, as it arises around a certain hypothesis to be verified based on several different clues that justify the asymmetric probabilistic values. This type of probability is often used in scientific hypotheses and theories, as well as in proving and justifying things, and it is affected by the corresponding counterparts of competing hypotheses. Its importance is due to the fact that it represents the fundamental element that can achieve the construction of inductive evidence to prove special cases in a way that is not tainted by the familiar suspicions contained in the right of inductive generalizations. According to the qualitative difference of evidence that justifies the probability inequality, this evidence is based on a probability resource that does not accept arithmetic.

However, this inequality does not prevent us from reaching the stage of certainty. As long as there is an increase and development in the probabilistic qualitative according to the increase of the various shreds of evidence indicating the hypothesis, This sets the stage for reaching that stage when we do not need additional new clues.

In general, we revealed that with interpretive probability, things and their symmetries are proven, and thus the justification of working with symmetrical probability is achieved and that this (interpretive) probability is based on the existence of an asymmetric possibility that is justified by the difference of evidence, which means that this difference infers similarity. The difference is the basis for proving similarity, not the other way around.

The reference